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# Journal OF THE AMERICAN DIETETIC ASSOCIATION

VOL. 27, NO. 4 APRIL 1951

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VIII. Food Cost Accounting

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A.D.A. Staff Changes

Report of the Midcentury White House Conference on Children and Youth

***34th A.D.A. Annual Meeting, Cleveland, October 9-12, 1951***

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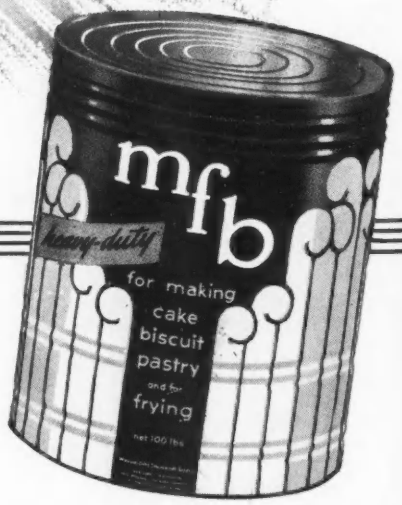


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# Wider Horizons for Children

## The Midcentury White House Conference and Children's Nutrition[1]

**LEONA BAUMGARTNER, M.D., Ph.D.**

*Consultant, Children's Bureau, Federal Security Agency, Washington, D. C., and Assistant Commissioner of Health, New York City*

MANY years ago, that great teacher of doctors, nurses, and all who practice the healing arts, Sir William Osler, delivered a sermon to undergraduate students at Yale. It was an address any archbishop or poet would have been happy to deliver. Reprinted many times, its title is *A Way of Life* (1). The great doctor began by telling of standing on the bridge of a great ocean liner and learning that the captain of that ship depended on large doors that closed on a signal—doors that closed water-tight compartments on which the safety of the great liner depended. Osler admonished his listeners to learn how to live in "day-tight" compartments—to learn to shut out the past and the future and settle into the job one faced today. He pointed out that one might from time to time scale the heights and look forward and back, but for the most part life is "a straight and plain business," even as it is for you and me.

This we recognize, and for that reason perhaps we cherish the more those few occasions upon which we can leave the details of our day-to-day work and look out—forward and backward—to ascertain, if we can, in what direction our ship is going, what progress we've made, and even dream about new promised lands to which we might sail.

### PREVIOUS WHITE HOUSE CONFERENCES

And the midcentury year was one of those rare occasions—for it was the year of another White House Conference on children. It has become customary in this century for each decade to be ushered in with a White House Conference—a conference which looks backward to see what progress has been made in our children's lives, to see where we can and should be going to improve their lives. Each conference has helped formulate, establish, and promote an idea, a movement, an action that has subsequently become firmly entrenched in our American pattern of life. The first, called by President Theodore Roosevelt in 1909, focused on the then novel idea that the need of a homeless child is for a home, not an institution. Acceptance of this idea stimulated the development of our modern foster-home movement and led to the closing of many archaic children's institutions and to providing allowances for dependent children. All in all, it brought to thousands of our present citizens reasonably normal home conditions. The first conference provided, too, a stimulus to the creation of a separate unit of the federal government, the Children's Bureau, which would be concerned with "the welfare of children and child life among all classes of our people"—a courageous step which has since been followed by many other countries.

The second conference, called by President Woodrow Wilson, prepared the first formulation of child welfare and health standards—a practice widely followed by many governmental and non-governmental groups ever since.

The third, in the time of President Herbert Hoover, led to a comprehensive report of thirty-two volumes which embodied the most elaborate and scientifically documented analysis of knowledge concerning the needs of children ever made. The "Children's Charter," a guidepost for years to come, summarized the goals of this conference—goals still not attained. The whole field of pediatrics gained enormously by the impetus of this conference, too.

The fourth conference, that of 1940, in the shadow of a great world war, broadened the scope of previous conferences by high-lighting the importance of the child in a modern democracy.

### THE 1950 WHITE HOUSE CONFERENCE

And now the fifth conference was held in December. It was focused on that great problem of modern times, the development of "the mental, emotional, and spiritual qualities essential to individual happiness [and aren't you glad they said 'happiness'?]

[1] Based on a paper presented at the 33rd Annual Meeting of The American Dietetics Association in Washington, D. C., on October 18, 1950.

and to responsible citizenship." Like other conferences, this one had studied progress made since the last conference. It focused on "what physical, economic, and social conditions are deemed necessary to this development." Like other conferences, this was a joint effort of governmental and non-governmental groups, financed almost entirely by private funds and operated by a national committee of fifty-two private citizens who, in turn, were helped by an expert secretariat. Like other conferences, too, hundreds of the best scientists in the country served on "fact-finding" committees, and hundreds of organizations—governmental and non-governmental—were brought into the reporting process.

But, as I see it, this conference had two unique features. It was the first one in which young people themselves participated. They had a council of their own and were full of ideas for the rest of us. It also was more of a "grass roots" conference than the others. Every state and territory and over one-third of the counties in the nation had their own White House Conference committees. It was estimated that over 100,000 persons had participated as early as last July in some way in the preparatory studies, of whom some 15,000 were professional workers. And they worked not just for now, but for the future. As one local representative said to me, "It's wonderful. This is the first time in our town that the superintendent of schools, the chief of police, the health officer and doctors, the head of the Chamber of Commerce, the ministers, and a lot of other folks who really care about our kids have had a chance to get together to see what we can do in our town. We don't care so much about what happens down there in Washington in December—we're all steamed up about what is happening here." That, I submit, means that the fifth White House Conference was already a success before it happened.

But what were the highlights from the Conference which are of particular interest to the members of this Association? First, a series of technical statements on nutrition (2) were prepared by various groups of experts. These covered the changes in concepts and practices in nutrition; reviewed the nutritional requirements and status of children, the adequacy of family and children's diets, and measures currently used for improving child nutrition; indicated some of what is known about the factors which affect the child's food intake; summarized recommendations concerned with nutrition of children made by various national health groups; and speculated on the areas in which more research and more application of research findings are needed. Even a glance at these materials indicates the tremendous strides that have been made in the knowledge of human nutrition in the past decade, and the slower but still substantial gains that have been made in the application of this knowledge to children in all classes of our population.

### ADVANCES IN THE LAST DECADE

Important, of course, are the many individual scientific discoveries in the field, such as the identification and synthesis of certain specific elements important in human nutrition, the development of better methods (micro-chemical, for example) of determining nutritional status, and the newer knowledge of the nutritional treatment of diabetes and other diseases. The use of radioactive tracer elements in metabolic studies promises to be the answer to a whole Pandora's box of hitherto unsolved problems. Already some of these nutritional problems are being elucidated through our better knowledge of carbohydrate metabolism and the release of energy and of the $B_{12}$ complex and animal proteins. It is possible that some of these fundamental studies will change significantly the practical problems you face today, just as the antibiotics and the sulfa drugs have changed the daily lives of doctors and nurses—and their patients.

Of greatest practical significance in the public health aspects of nutrition in the United States, however, in the past decade have been the significant increases in the amount of protective foods produced in this country and the enormous national program of bread enrichment. School lunches have, of course, helped child nutrition enormously.

Another advance in this decade has been the establishment of allowances for calories and for specific nutrients by the Food and Nutrition Board of the National Research Council, first set up in May of 1941. These allowances have been revised twice and will continue to be as research findings indicate a need for change, but they have established "objectives toward which to aim in planning practical dietaries" for a given age group. It should be, perhaps, continuously re-emphasized that these are not intended to represent minimal needs of average individuals but rather "levels enough higher to cover substantially all individual variations in the requirements of normal people" (2).

We can expect a continuing flood of notable research from our scientific investigators—but what goes on away from the laboratory?

Certainly, a concept of not just "food" but the "right foods" is more and more deeply entrenched in our thinking and practice. One of the most exciting findings of the 1950 fact-finding report in nutrition is this one of an ever-increasing better diet for families and presumably for children. This is verified by nation-wide dietary surveys—1936 and 1942 (3, 4) and 1948 (5)—which indicate how well food supplies were distributed and how well families with similar means ate at each of these times.

Trends in the national food consumption tell the same story—that diets are improving with the times, the economic situation, and the advancement and spread of nutritional knowledge. The trend is the same in urban and rural families. For example,

consumption of meat, poultry, fish, and eggs increased some 30 per cent in urban families in the lowest economic third of the population from 1942 to 1948, with milk products (other than butter), tomatoes, citrus fruit, and green and yellow vegetables increasing 20 per cent. (5) These specific gains are substantial.

### PROBLEMS TO BE MET

On the other hand, there is evidence of general under-nutrition and mild forms of specific malnutrition in some sections of the country. These are a matter of concern to those concentrating on emotional, mental, and spiritual well-being of children. Listlessness and apathy are well recognized concomitants of such borderline nutritional status and often respond dramatically to better feeding.

We cannot be satisfied with the nutritional state of our children when we look more carefully at the picture. General figures are good—but more careful analysis reveals two or three challenging facts.

First, although most of our families are small ones, most of our children live in *large* families. Over one-half of our children live in one-sixth of our families, and those are the families with three or more children (6). These are the families, too, with incomes of less than $3000 a year. Just as the money that families have for buying a living for their children bears little relation to the number of children for whom they must provide, so states and regions which are rich in children are poorer—poorer both in terms of average annual income and in terms of community services for families. Truly it is our least privileged who carry the load of rearing most of our future citizens.

We can look at other specifics which recent studies have shown. Children of elementary school age appear to have better diets on the average than other children, with the younger ages better off than the older. This has been found true in as widely differing areas as metropolitan Chicago (7), Upstate New York (8), and Alaska (9). Other studies indicate that during adolescence, boys are likely to eat more and get better diets than girls (10). In view of the now classical studies of the past fifteen years that have indicated the extent to which the health of the pregnant woman and her newborn baby are determined by the mother's nutrition, these evidences of poor food selection and consumption in adolescent girls and college women are of real concern.

But possibly the most cheerful part of the picture is that our experts tell us (2) that "the 1950 food supply in the United States could give every man, woman, and child a diet of high quality if shared according to need and made ready for eating by practices best adapted to conserve food values." This possibility is here—within our grasp. The real question is whether we decide to go through with the job of seeing that all people have available those foods which are essential for healthy growth of body, mind, and spirit.

### FOOD AS A PART OF LIVING

Another trend of the past decade that comes out sharply is that providing food and good food is only part of the job. Also significant is an increasing tendency to relate our food intake to other factors than the amount and kind of food a person has had put in front of him. It is not strange that this is so—for we have always known that father doesn't eat his dinner when he's too upset at the office, that Johnny and all the little Smiths, just like papa, don't eat vegetables, and that when Susie finally got home from the convalescent home she hated so much, she gained weight as she hadn't all the time she was in the country. Yes, those things have been known for years—so well-known perhaps that we've often failed to capitalize on their true significance. The recent surge of interest in psychosomatic illness and in mental health has re-emphasized the relation of food to mental health and mental health to physical health. Certainly all the factors that determine physical health are far from known.

Moreover, our very concept of health is changing. It now has a plus value, that value that makes a child jump gaily across the brook instead of picking his way wearily from stone to stone. It has the plus value that gives the mother a sense of well-being as she does her daily chores. It's not merely the absence of disease, it's more—and the promotion of that something more is still a thing we know too little about.

One of the applications of this newer point of view is that in the field of nutrition emphasis is being put, for example, and I believe I am using the same words you do, on "humanizing food practices in children's wards." This obviously is an effort to put mental health in dietetics. This Association, I am told, has led in this direction. It has adopted the usual American practice of solving the problem by having a committee tend to the matter. But you and I know that no matter how good that committee is in pointing the way, the rest of us will have to carry out the job. What can we do—now?

### FOOD SERVICE FOR HOSPITALIZED CHILDREN

To illustrate, I'd like to describe a single experience I had last year. I understand that some 3500 or 42 per cent of the members of The American Dietetic Association are hospital dietitians, so I take an illustration that should not be foreign to most of them. I was asked for ideas on how teachers could help the child in the hospital—not merely help him keep up with his geography lesson but help build him up as a child, physically and emotionally. So I asked to visit one of the hospitals where this group of teachers would be working—not just to visit casually but to spend a day with the children so I could gain a clearer picture of their lives.

There were fifteen children with tuberculosis and certain other conditions in which special efforts were

being made to get them to gain weight. Trays came in at meal times heavily laden with food—well prepared food, high caloric, high-vitamin food. An unattractive attendant whose sole purpose appeared to be to get the trays in and out of the room as fast as possible shoved the heavy trays with the heavy dishes at children. Johnny, age eight, took one look and pushed it away. In a discouraged voice, I heard him sigh, "Oh, I can never eat that much." Tony, twelve, picked here and there—but few of the foods were ones he knew in his Italian home where mother hovered over his every mouthful; no one had ever told him that these foods (new to him) were all right to eat. After some reassurance and a very few words of explanation, for example, that potatoes and spaghetti both put fat and muscles on a human frame, he went at his plate with some eagerness. After several earnest tries, Mary, age three, gave up her nourishing, good custard simply because the spoon was too big for her to handle. And not one of the children, ever got the good baked potatoes open. The skins were a little tough and knives not too sharp. Thus all the trays went back with much uneaten food—excellent food, carefully prepared for children whose recovery depended on it.

"Atypical," you say; perhaps—but it was a good hospital with good staff. And just a little thought, no extra personnel, and the same amount of money spent on food could have converted this mass production job into a more individualized and humanized one that really achieved the desired end—that of helping sick children regain health.

This is a simple example, but not too simple, I hope, to emphasize the point that physical, emotional, mental, and spiritual well-being are interrelated to a much greater extent than we ordinarily accept. This means, for example, if we talk of food, we must realize that both *what we eat* and *how we feel about what we eat*—yes both—affect our total well-being. It was declared long ago that "man shall not live by bread alone."

Actually, as we look more carefully into our daily practices and our unsolved problems, we see that we can benefit by an increasing awareness of this concept. As we use it we find, for example, revitalized programs of nutrition education—programs that begin with interest in the individual or the group instead of the several categories of foodstuffs or admonitions to be sure to eat the Basic Seven. We find a new interest in determining when a baby is ready and able physiologically to swallow cereal. We become concerned about building up the mother-child relationship in the first feedings, either at breast or with the bottle. We watch to see when the baby is hungry instead of listening for the ring of an alarm clock to decide how often to feed the baby.

We ask our research workers to turn their attention to problems like these: Which cultural factors affect food habits desirably? How can these be retained or promoted and undesirable practices modified? What are the effects of child-feeding practices in families, in group-feeding situations (say the school lunchroom, hospital, convalescent home, or children's institution) on emotional development? What are effective methods of education which will assist children in developing good food habits?

These were some of the wider horizons for children to which the Midcentury White House Conference on Children and Youth bids a group like this, The American Dietetic Association, lift its sights. Though we live in our "day-tight," our kitchen, laboratory, institution-tight compartments, these are horizons we can explore right there. If only all of us who work with and for children could remember that what we *are to* children is often more important than what we *do for* them. This is true in our own land, for our own children. But it is also true on the wider horizon of our world, where we need so desperately to prove to ourselves and to the rest of the world who look to us for more than food and material help that we, too, have an ideal worth struggling for. That is the ideal of the high value we put on the worth and dignity of man—which in every culture is reflected most sharply in what we are to our children. This is our challenge—an ever-widening horizon for all the world's children.

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# Lunch Programs in Ohio Public Schools[1]

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TO teachers, nutritionists, and others interested in child health and welfare, the nutrition of school children has long been a matter of concern. A one-year study was made of factors influencing the nutritive value and acceptance of food served in some Ohio public school lunchrooms through a grant made by the Institute of Nutrition and Food Technology at The Ohio State University. This study was designed to provide information on the management and operation of typical school lunch programs, to obtain insight into their problems and limitations, and to find ways in which these programs might be strengthened.

The Ohio Department of Education, the Ohio Department of Health, and 472 public schools worked cooperatively with the Institute of Nutrition and Food Technology in carrying out this study. The majority of these schools were selected at random, although in a few cases selection was made on the recommendation of the Ohio Department of Education or the county school superintendent. Permission to work in these schools was granted by state, county, and local school officials, and all were fully informed regarding the procedure and type of work.

Of the 472 schools studied, 161 had no lunch program. In these schools, information was obtained on their limitations and the type of assistance needed to establish school lunch programs. The remaining 313 schools had lunch programs in which factors related to the nutritive value and acceptance of the lunch were studied. For example, lunchroom management and operation were studied in 288 schools, food habits in 19 schools, vegetable acceptance in 3 schools, and method of service in 1 school.

Data from these studies were analyzed in the Statistics Laboratory at The Ohio State University and the schools were informed of the findings. A summary of the results of these studies is reported here.

### Management and Operation

Lunch programs in Ohio schools are classified as federal and non-federal, depending upon their means of financial support. Federal programs receive surplus commodities and reimbursement from the United States Department of Agriculture, while non-federal programs are independently or self-supported. Data on the management and operation of 116 federal and 72 non-federal programs were obtained by questionnaire survey. These 288 randomly selected schools constituted a statistically adequate sample and provided reliable information on practices in other Ohio lunch programs.

How many children ate at school when a planned lunch is served? Reports showed from 45 to 50 per cent of the children ate in the lunchroom. The average school lunch participation in a federal program was 207 as compared to 304 in a non-federal program. Enrollment varied from an average of 420 in schools with federal programs to 681 in schools with non-federal programs.

Who writes the menus and orders food? Forty-one per cent of the federal programs listed the cook; 28 per cent, the home economics teacher; 16 per cent, the cook and home economics teacher together; 10 per cent, a lunchroom manager; and 5 per cent, other persons such as the principal, school nurse, and elementary teacher. The response from schools with non-federal programs revealed that the management in these schools differed in one respect: 33 per cent of these programs were under the supervision of a specially appointed school lunch manager. For the most part these schools were located in cities.

The method of serving food has been a controversial issue in many schools. Although it was not the purpose of this survey to determine the preferable method, an attempt was made to find out what type service was most often used in the schools. The findings showed that the majority of school lunch programs, both federal and non-federal, used the planned plate lunch. In some cases, this was modified by giving the child a choice of perhaps vegetables one day, fruits the next, and vegetables the third day. The à la carte method of service, in which no plate lunches were served and in which the children were allowed a free choice of foods was least common.

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[2] Present address: Ohio Agricultural Experiment Station, Wooster.

To parents with several children in school, the price of the lunch is a subject of great importance. The average cost of a lunch with milk in a federal lunch program was 23 cents and that in a non-federal program, 27 cents. It should be pointed out that a plate lunch with milk, in either case, cost significantly less than a nutritionally adequate lunch selected from à la carte items. For example, an à la carte lunch in a federal program lunchroom containing 2 oz. meat, a vegetable or fruit, milk, bread, and butter would cost approximately 31 cents as compared to 23 cents for this same menu served as a plate lunch.

All of the schools participating in this study served milk; yet, the kind of milk and the butterfat content varied considerably. Sixty-two per cent served both chocolate and whole milk, 37 per cent served only whole milk, and 0.4 per cent served only chocolate milk.

The butterfat content of chocolate milk has been a matter of concern to many Ohio school administrators. Any chocolate beverage with a butterfat content of less than 3.5 per cent cannot be sold as milk but is considered a chocolate "drink" and must be so labeled by the dairy. Many schools have unintentionally deprived children of essential milk solids by selling a chocolate drink in their lunchrooms. For the past several years, an active educational campaign has been under way to correct this situation. According to this survey, only 7 of the 288 schools were still serving a chocolate drink with a butterfat content of less than 3.5 per cent.

Ninety per cent of the schools had facilities for serving all the children who wished to eat at school. Among those schools with lunchroom limitations, the report showed that 101 additional children, or 18 per cent, might have eaten at school in those schools with the federal program, and 145 children, or 24 per cent, in those schools with non-federal programs. The limitations, in order of prevalence were: floor space, dining room equipment, and kitchen equipment.

### Food Habits of High School Students

Information on the food habits of 3813 high school students was obtained by a questionnaire survey in 19 schools. Approximately half of the schools were in cities or villages where students had access to restaurants and drug stores in addition to the school lunch. The other schools were located in rural areas where the school lunch was the principal feeding facility.

Where do high school students eat lunch? Fifty-one students or 3 per cent of the total ate no lunch. The remainder had lunch but ate in a variety of places. The percentage of students patronizing these various eating places was as follows: home, 35 per cent; school lunchroom, 32 per cent; restaurant, 12 per cent; drug store, 4 per cent; brought lunch from home, 15 per cent; other miscellaneous places, less than 1 per cent.

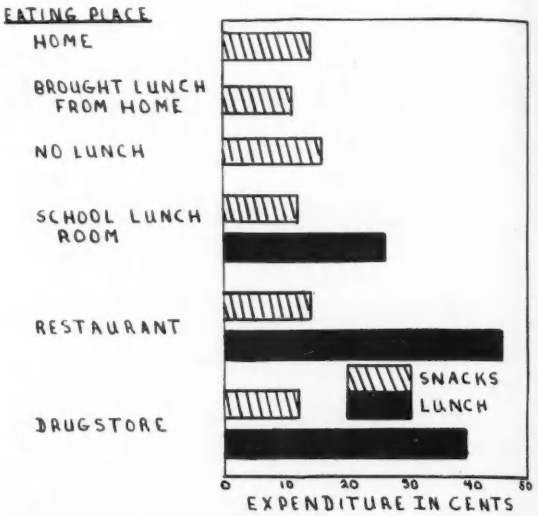


FIG. 1. *Average expenditures of 3813 Ohio high school students for lunch and snacks.*

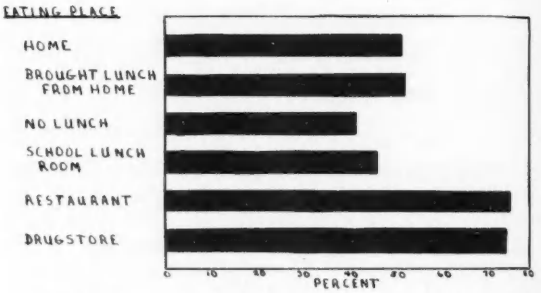


FIG. 2. *Percentage of high school students buying snacks in addition to lunch.*

When students bought their lunch, prices ranged from 5 cents to $1.36. As can be seen in Figure 1, there was a definite relation between the eating place and the price of the lunch. For example, the average price of the school lunch was 26 cents as compared to 45 cents for a restaurant lunch and 39 cents for a drug store lunch. Referring again to Figure 1, the highest average expenditures for snacks were observed when students ate no lunch; the lowest were found among students bringing their lunches from home. Not only do students who eat in restaurants and drug stores spend more for their lunches, but a greater proportion of them buy snacks in addition to their meal. As shown in Figure 2, less than half of the students eating in the school lunchroom purchased these extras, as compared to 76 per cent of those who ate in a restaurant and 74 per cent who ate in a drug store.

As previously mentioned, fifty-one students ate no lunch. It is interesting to note that about half

these students (Fig. 2) spent money for snacks sometime during the day with an average expenditure of 16 cents. (Fig. 1).

An analysis was made to determine whether the amount of money spent for lunch by students buying both lunch and snacks differed from the amount spent by students buying only lunch. According to these data, students buying snacks in addition to their lunches spent significantly more for lunch than students buying lunch alone.

### *Rural Students*

How do rural high school students compare with city students in their noon-time food habits? It was found that rural students participated in the school lunch program to a greater extent than city students. This may have been because the school lunch was the principal lunch facility available, since restaurants and other establishments were less accessible in rural areas. The average price of the lunch was considerably higher for city students and a greater proportion of them purchased snacks in addition to their lunch. According to findings of an earlier study, schools receiving surplus commodities and reimbursement from federal funds sell their lunches for less than schools with independently supported programs. Since much of this federal aid is granted to rural schools, this may account for the lower lunch costs in these areas.

### *Eating Habits of Boys and Girls*

Other interesting observations were made by comparing the eating habits of boys and girls. Girls were found to eat in the school lunchroom to a greater extent than boys. Not only did a greater proportion of boys buy snacks, but their expenditures for both food and snacks were significantly greater than those of the girls.

### *Nutritive Value of Lunches*

The nutritive value of the lunch is a matter of primary importance. Each student reported what he had eaten for lunch on the day prior to the survey. The nutritional adequacy of 486 lunches was estimated qualitatively by rating each lunch according to an arbitrary system. Foods or groups of foods that should be included in a well balanced lunch were given point values per serving as shown in Table 1. After assessing the point value of the lunch, each was then rated according to the following plan: good, 18 points or more; fair, from 14 to 17 points inclusive; poor, 13 points or less. Accordingly, 8 per cent of the 486 lunches were rated good, 31 per cent were fair, and 61 per cent were poor.

In reviewing the results of this study, certain facts are recognized as being particularly significant. Only 1206 students, or about one-third of the total, ate in the school lunchroom, even though these facilities were available to everyone. Approximately one-sixth of the students ate in restaurants and drug stores where the cost of the lunch was considerably higher than at school. Although only a very small proportion of the students had no lunch, about half of this group spent an average of 16 cents for snacks sometime during the day. The majority of students ate lunch; yet they apparently lacked either the knowledge or facilities for obtaining an adequate meal.

TABLE 1

*Arbitrary point values assigned to certain food groups used in school lunch programs*

| FOOD GROUP | POINT VALUE |
|---|---|
| Green and yellow vegetables | 4 |
| Oranges, tomatoes, grapefruit, raw cabbage, or salad greens | 4 |
| Potatoes and other fruits and vegetables | 2 |
| Milk—1 cup | 4 |
| Ice cream | 2 |
| Meat, poultry, fish, egg, or other protein-rich food | 4 |
| Bread—2 slices | 4 |

### Vegetable Acceptance

The effect of price and preparation on vegetable acceptance was observed in two elementary schools: one had a good nutrition education program; the other placed no emphasis on this subject.

Observations on a week's controlled menus were made for three consecutive weeks in each school. These menus met requirements of the Type A lunch and permitted the child to select one of two vegetables that were prepared each day. These ten vegetables were cooked and served in the simplest manner possible. Acceptance was measured by the number of selections of the vegetable and the weighed plate waste of each.

The first week of the study was a control observation. From the data on selection and waste, it was possible to determine which vegetable in each of the five pairs was less popular. During the second week, the price of each less popular vegetable was lowered 3 cents to see if children would select a vegetable they didn't like if it cost less. In the third week, the method of preparing the less popular vegetable was varied to see if preparation would influence acceptance when prices were constant.

It may be concluded that, within the limits of this study, price and preparation significantly influenced vegetable selection, although no significant difference in waste was observed from one week to the next. However, the plate waste for all foods was much less in the school with the nutrition education program than in the one which had no such program.

A similar study was carried out in a third school. This was a consolidated school (Grades 1 through

TABLE 2

*Comparison of student participation, left-over food, raw food cost, and plate waste in a school which switched from à la carte to plate lunch service*

| TYPE OF SERVICE | AVERAGE DAILY PARTICIPATION | RAW FOOD COST PER PERSON | TOTAL WEEKLY LEFT-OVERS | AVERAGE PLATE WASTE |
|---|---|---|---|---|
| | *students* | *¢/day* | *lb.* | *oz./day* |
| A la carte | 100 | 22.8 | 139¼ | 2.2 |
| Planned plate lunch | 107 | 20.7 | 142¼ | 2.2 |

12) in which no organized nutrition education had been conducted. Here again vegetable selection was influenced by price and preparation, and plate waste ranked about midway between that observed in the two previously studied schools.

### Method of Meal Service

The best method of serving the school lunch has been a controversial issue in many schools. Although arguments are given for both the à la carte and planned plate lunch, little factual information is available to support these claims. In an attempt to determine which method provides greater efficiency and economy, observations on raw food cost, waste, and production time were made before and after a school converted from the à la carte to the planned plate lunch.

As can be seen in Table 2, there was no significant difference in school lunch participation, left-over food, and plate waste after the change. It is interesting to note that the per capita raw food cost was reduced about 2 cents when the plate lunch was used. It should be pointed out, however, that different menus were used in these two periods of observation, and the reduction in raw food cost during the second period might be attributed to this menu change, the increased use of surplus commodities, and a general reduction in food prices.

From the findings of this study, it would appear that à la carte service and the planned plate lunch are quite similar in efficiency and economy. However, the planned plate lunch was not in complete enforcement when the second series of observations were made. Although students were required to select a Type A plate lunch, they were often given an opportunity to make their selections from several salads, main dishes, and desserts. Therefore, from the standpoint of kitchen efficiency and economy, little change was evident since a great variety of foods were still being prepared and served.

The findings of this study do not show significant changes in cost, waste, and production time that might have been expected after the school converted to the planned plate lunch. However, differences might have been found if a larger number of schools had been studied under carefully controlled conditions. Before a definite statement of advantage could be made for either method of service, it would be necessary to repeat these observations in additional schools where the functions of both the planned plate lunch and the à la carte service are specifically defined.

### Schools with No Lunch Programs

Considerable attention has been focused on the management and operation of lunch programs in Ohio schools. Yet, equally important are the numerous schools with no facilities for serving a school lunch. Through a questionnaire survey, the special problems and limitations of 161 randomly selected schools without lunch programs were studied.

An average of 266 children were enrolled in each school. Of the 161 schools studied, 124 were elementary schools, 22 were consolidated schools, and the remaining schools were classified as follows: elementary and junior high, 2; junior high, 4; junior and senior high, 5; senior high, 6.

These schools were asked if they had ever had a school lunch program. Eighty-three per cent said "no"; 17 per cent said "yes." The chief reason for discontinuing the programs had been the withdrawal of government aid following the depression.

What were the chief factors that prevented schools from having school lunch programs? Eight reasons were given in the following order: inadequate space, insufficient funds, children live near school and eat at home, lack of community interest, no one to organize program, lack of employees, lack of equipment, and lack of knowledge of food. Seventy per cent of the schools said they would be interested in having a school lunch program if these limitations could be removed.

Schools were asked to estimate the number of children who would participate in a lunch program if such were available. The 111 schools answering this question estimated that about 48 per cent of their enrollments, or a total of 11,837 children, would participate in a school lunch program. When schools have no lunch programs, the majority of the children go home at noon or carry a home-packed lunch.

Perhaps the most significant finding of this study is the fact that the majority of the schools would like to have lunch programs if their limitations could be removed. These limitations, which were largely a matter of finance and education, indicate the areas in which greatest assistance is needed.

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Coffee and tea were introduced to European civilization almost simultaneously; Dutch traders brought tea from the Orient in 1610, and Italian merchants returned from Arabia with coffee about five years later.

# Fall and Spring Diets of School Children in New York State[1]

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THE present study is concerned with the food-nutrient intake of New York State children ranging in school-grade from the junior kindergarten through the eighth grade. The nutrient intake of the children is evaluated by comparison with the National Research Council Recommended Dietary Allowances (1) for the age groups studied. In addition, a comparison is made between the food-nutrient intake of the children in the spring and in the fall, to ascertain what influence season of the year may have upon diet. The intakes of calories, protein, calcium, iron, vitamin A, thiamine, riboflavin, niacin, and ascorbic acid were calculated for each child.

## METHODS

### *Participants in the Study*

The children in the study were from three schools in central and southern New York State. Schools *1* and *2* drew students predominantly from urban homes in communities having populations of approximately 20,000[2] and 13,000[2], respectively, while School *3* represented predominantly rural homes in a community of 750[2] population. Three hundred and fifty preadolescent and adolescent children ranging in age from four to eighteen years participated, and of this number, 276 children kept dietary records in both the spring and fall.

### *Collection of Food Records*

*Diet Booklets.* The record of food intake of each child over a seven-day period was kept in fall and/or spring in a special booklet which carried on its cover spaces for the name, the school, and the dates covered. Printed instructions for the recording of the food eaten were also placed on the cover. The inside pages of the booklet had spaces for the date, time, and place of eating of the food, description of this food, and the amount eaten. The children were to record everything that they "put in their mouths and swallowed."

*Instructions for Record Keeping.* The children in the grades below the fifth were usually too young to trust with the sole responsibility of recording their food intake; therefore their parents were asked to help them. These parents were sent detailed instruction sheets with special admonition to record the kind of food eaten, e.g. brand name for cereals, composition of food mixtures or sandwiches, raw or cooked foods, and so on. Details for ways to approximate the amount of food eaten were also included. The teachers of the fifth and sixth grades were given the same sheet of instructions plus oral supplementation, since they were to aid the children in their classes in keeping the record. The children in the seventh and eighth grades were given instructions for keeping the food record first by individual interview, and again in group classroom meetings the day before the records were started. Those children keeping their own records were instructed to keep the booklets with them at all times, to record all food and drinks as soon as consumed, and not to rely upon their memory.

### *Calculation of Nutrient Intake*

The U. S. Public Health Service "Food Value Tables" (2) were used as the main source of information for the nutrient value of the foods. Bowes and Church (3) served as a supplement. The total daily intake of each nutrient was calculated by either the conventional long method or by the modification of this method by Babcock (4). The average of the seven-day records was the basis for all analyses of the data.

### *Division of the "Grade Groups" into Age Groups*

The predominant age in each grade was used as a basis for comparing the dietary intake of the grade

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[2] 1940 Census.

with the Recommended Dietary Allowances for the age, viz.:

| | |
|---|---|
| Junior and senior kindergarten and first grade | 4 to 6 years |
| Second, third, and fourth grades | 7 to 9 years |
| Fifth and sixth grades | 10 to 12 years |
| Seventh and eighth grades | 13 to 15 years |

There was, of course, some overlapping of ages and grades, but on the whole the above ages predominated in the grade groups as listed.

The differences in nutrient intake for the boys and for the girls was taken into account only for those children over twelve years of age.

## RESULTS

The average daily intake, of each of the nine nutrients, based on seven-day records, for the four age groups is given in Table 1. The children from four to twelve years old were, according to these group averages, receiving adequate dietaries when compared to the recommended allowances, the only notable exception being the caloric intake for the ten-to-twelve-year olds—approximately 2200 instead of the recommended 2500. The thirteen-to-fifteen-year olds, regardless of sex, were ingesting diets deficient in calories, calcium, iron, and ascorbic acid when judged by these standards.

TABLE 1

*Average nutrient intake by age group as indicated by seven-day food records*

| NUTRIENTS AND SEASON | AGE GROUP | | | | |
|---|---|---|---|---|---|
| | 4 to 6 years* | 7 to 9 years† | 10 to 12 years‡ | 13 to 15 years | |
| | | | | Girls § | Boys¶ |
| Calories | | | | | |
| Spring | 1831 | 2074 | 2205 | 2209 | 2694 |
| Fall | 1764 | 2058 | 2189 | 2092 | 2743 |
| Protein (gm.) | | | | | |
| Spring | 62.0 | 69.6 | 74.9 | 72.4 | 86.8 |
| Fall | 59.7 | 68.2 | 73.0 | 68.4 | 88.9 |
| Calcium (mg.) | | | | | |
| Spring | 1140 | 1177 | 1237 | 1182 | 1311 |
| Fall | 1108 | 1225 | 1301 | 1106 | 1377 |
| Iron (mg.) | | | | | |
| Spring | 8.5 | 10.2 | 11.6 | 10.9 | 13.8 |
| Fall | 8.1 | 9.8 | 11.0 | 10.9 | 14.6 |
| Vitamin A (I.U.) | | | | | |
| Spring | 5387 | 6654 | 6928 | 6349 | 5999 |
| Fall | 5145 | 5953 | 6798 | 6384 | 7477 |
| Thiamine (mg.) | | | | | |
| Spring | 1.01 | 1.15 | 1.28 | 1.20 | 1.49 |
| Fall | 0.97 | 1.15 | 1.23 | 1.17 | 1.54 |
| Riboflavin (mg.) | | | | | |
| Spring | 1.97 | 2.09 | 2.23 | 2.11 | 2.38 |
| Fall | 1.88 | 2.09 | 2.26 | 1.94 | 2.45 |
| Niacin (mg.) | | | | | |
| Spring | 8.5 | 10.3 | 11.6 | 11.3 | 14.2 |
| Fall | 8.0 | 9.8 | 10.9 | 10.9 | 15.0 |
| Ascorbic acid (mg.) | | | | | |
| Spring | 65 | 76 | 77 | 77 | 81 |
| Fall | 62 | 70 | 70 | 69 | 85 |

* 77 children in spring; 91 in fall.
† 69 children in spring; 72 in fall.
‡ 48 children in spring; 46 in fall.
§ 92 girls in spring; 78 in fall.
¶ 72 boys in spring; 56 in fall.

Such averages, however, may be misleading; therefore the dietary record of the individual child was evaluated using the Recommended Dietary Allowances as a standard of 100 per cent. For ease in this evaluation, the nutrient intake of the children in each age group was divided into four categories:

96% or over of the Recommended Dietary Allowances
66 to 95% of the Recommended Dietary Allowances
36 to 65% of the Recommended Dietary Allowances
35% or under of the Recommended Dietary Allowances

The grouping of the results into these arbitrary categories indicated that the younger children met or exceeded their allowances more frequently than the older children. From Table 2, one notices that 76 to 78 per cent of the four-to-six-year age group ingested 96 per cent or over of the Allowances, while this was true of only 43 per cent of the thirteen-to-fifteen-year-old children. This same trend was evident for all four age groups; as the age of the group increased, the percentage of the children fully meeting the allowances decreased. Calcium and ascorbic acid were the nutrients most often taken in less amounts, and iron intake also become inadequate when the children were ten years or older.

The age group of thirteen to fifteen years was further divided into boys and girls, because it is around this age that the stress of adolescence begins. Only 36 to 39 per cent of the girls met their full allowances, while 49 to 55 per cent of the boys consumed adequate diets. The girls of this age ingested lower amounts of protein, iron, thiamine, riboflavin, niacin, and ascorbic acid than the boys.

There was no detectable influence of the season of the year, spring or fall, on the percentage of the children included in the four categories of nutrient intake in Table 2.

The dietary intake of the various nutrients for the children who kept records in both the spring and the fall was compared by Student's "t" (5) (Table 3). There was little effect of season on the intake of the nine nutrients calculated for the four groups. Vitamin A intake differed significantly between spring and fall for the seven-to-nine-year age group, but the mean differences were not significant for the other age groups. The ten-to-twelve-year-old children had significantly higher intakes of niacin in one season, but again this was an isolated instance. Protein and riboflavin intake varied with season for the thirteen-to-fifteen-year age group. Variation of the other nutrients was not statistically significant.

TABLE 2

*Nutrient intake of New York State school children in terms of the Recommended Dietary Allowances*

| NUTRIENT | PERCENTAGE OF CHILDREN | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Intake under 35% of allowance | | Intake 36 to 65% of allowance | | Intake 66 to 95% of allowance | | Intake 96% of allowance or over | |
| | Spring | Fall | Spring | Fall | Spring | Fall | Spring | Fall |
| **Ages 4 to 6 Years*** | | | | | | | | |
| Calories | 0 | 0 | 1 | 1 | 30 | 24 | 69 | 75 |
| Protein | 0 | 0 | 1 | 1 | 19 | 16 | 79 | 82 |
| Calcium | 3 | 0 | 8 | 5 | 19 | 19 | 69 | 76 |
| Iron | 0 | 0 | 5 | 5 | 34 | 37 | 61 | 57 |
| Vitamin A | 0 | 0 | 0 | 0 | 1 | 4 | 99 | 96 |
| Thiamine | 0 | 0 | 0 | 0 | 17 | 13 | 83 | 87 |
| Riboflavin | 0 | 0 | 3 | 0 | 8 | 4 | 90 | 96 |
| Niacin | 0 | 0 | 5 | 7 | 35 | 40 | 60 | 54 |
| Ascorbic acid | 0 | 0 | 6 | 5 | 18 | 16 | 75 | 78 |
| Mean | 0 | 0 | 3 | 3 | 20 | 19 | 76 | 78 |
| **Ages 7 to 9 Years†** | | | | | | | | |
| Calories | 0 | 0 | 3 | 1 | 38 | 42 | 59 | 57 |
| Protein | 0 | 0 | 0 | 0 | 19 | 20 | 81 | 81 |
| Calcium | 0 | 0 | 4 | 1 | 19 | 15 | 77 | 83 |
| Iron | 0 | 0 | 1 | 7 | 42 | 43 | 57 | 50 |
| Vitamin A | 0 | 0 | 0 | 0 | 14 | 8 | 86 | 92 |
| Thiamine | 0 | 0 | 0 | 0 | 23 | 24 | 77 | 60 |
| Riboflavin | 0 | 0 | 3 | 0 | 6 | 6 | 91 | 94 |
| Niacin | 0 | 0 | 4 | 6 | 36 | 50 | 59 | 44 |
| Ascorbic acid | 0 | 0 | 12 | 8 | 23 | 29 | 65 | 63 |
| Mean | 0 | 0 | 3 | 3 | 25 | 26 | 72 | 71 |
| **Ages 10 to 12 Years‡** | | | | | | | | |
| Calories | 0 | 0 | 15 | 4 | 52 | 63 | 33 | 33 |
| Protein | 0 | 0 | 2 | 0 | 27 | 35 | 71 | 65 |
| Calcium | 0 | 0 | 10 | 0 | 31 | 26 | 58 | 74 |
| Iron | 0 | 0 | 10 | 15 | 50 | 43 | 40 | 41 |
| Vitamin A | 0 | 0 | 4 | 4 | 8 | 11 | 88 | 85 |
| Thiamine | 0 | 0 | 4 | 2 | 25 | 39 | 71 | 59 |
| Riboflavin | 0 | 0 | 2 | 4 | 19 | 9 | 79 | 87 |
| Niacin | 0 | 0 | 4 | 13 | 52 | 50 | 44 | 37 |
| Ascorbic acid | 2 | 4 | 19 | 22 | 21 | 35 | 58 | 39 |
| Mean | 0 | 0 | 8 | 7 | 31 | 35 | 61 | 58 |
| **Ages 13 to 15 Years—All Children⁂** | | | | | | | | |
| Calories | 0 | 0 | 18 | 22 | 53 | 49 | 29 | 29 |
| Protein | 1 | 0 | 10 | 13 | 42 | 43 | 47 | 44 |
| Calcium | 5 | 5 | 12 | 18 | 38 | 32 | 45 | 45 |
| Iron | 2 | 1 | 24 | 31 | 52 | 45 | 22 | 23 |
| Vitamin A | 3 | 1 | 13 | 12 | 24 | 21 | 59 | 66 |
| Thiamine | 1 | 0 | 10 | 13 | 48 | 42 | 42 | 45 |
| Riboflavin | 1 | 1 | 9 | 10 | 19 | 25 | 71 | 64 |
| Niacin | 1 | 0 | 14 | 19 | 49 | 49 | 36 | 32 |
| Ascorbic acid | 5 | 8 | 21 | 16 | 31 | 34 | 43 | 42 |
| Mean | 2 | 2 | 15 | 17 | 40 | 38 | 43 | 43 |

TABLE 2—*Continued*

| NUTRIENT | PERCENTAGE OF CHILDREN | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Intake under 35% of allowance | | Intake 36 to 65% of allowance | | Intake 66 to 95% of allowance | | Intake 96% of allowance or over | |
| | Spring | Fall | Spring | Fall | Spring | Fall | Spring | Fall |
| **Ages 13 to 15 Years—Girls Only¶** | | | | | | | | |
| Calories | 0 | 0 | 16 | 24 | 54 | 51 | 29 | 24 |
| Protein | 1 | 0 | 13 | 18 | 48 | 47 | 38 | 35 |
| Calcium | 4 | 5 | 12 | 23 | 42 | 33 | 41 | 38 |
| Iron | 2 | 0 | 37 | 42 | 50 | 50 | 11 | 8 |
| Vitamin A | 3 | 3 | 14 | 14 | 25 | 23 | 58 | 60 |
| Thiamine | 0 | 0 | 12 | 15 | 51 | 50 | 37 | 35 |
| Riboflavin | 0 | 0 | 10 | 14 | 24 | 29 | 66 | 56 |
| Niacin | 2 | 0 | 17 | 21 | 46 | 54 | 35 | 26 |
| Ascorbic acid | 3 | 10 | 23 | 18 | 32 | 36 | 42 | 36 |
| Mean | 2 | 3 | 17 | 20 | 42 | 41 | 39 | 36 |
| **Ages 13 to 15 Years—Boys Only‖** | | | | | | | | |
| Calories | 0 | 0 | 19 | 20 | 51 | 46 | 29 | 34 |
| Protein | 1 | 0 | 6 | 7 | 35 | 36 | 58 | 57 |
| Calcium | 7 | 5 | 12 | 11 | 32 | 30 | 49 | 54 |
| Iron | 3 | 2 | 7 | 16 | 54 | 38 | 36 | 45 |
| Vitamin A | 3 | 0 | 12 | 9 | 24 | 18 | 61 | 73 |
| Thiamine | 1 | 0 | 7 | 9 | 43 | 30 | 49 | 61 |
| Riboflavin | 3 | 2 | 8 | 3 | 12 | 20 | 76 | 75 |
| Niacin | 0 | 0 | 10 | 16 | 53 | 41 | 38 | 43 |
| Ascorbic acid | 8 | 5 | 18 | 14 | 31 | 30 | 43 | 50 |
| Mean | 3 | 2 | 11 | 11 | 37 | 32 | 49 | 55 |

* 77 children in spring; 91 in fall.
† 69 children in spring; 72 in fall.
‡ 48 children in spring; 46 in fall.
⁂ 164 children in spring; 134 in fall.
¶ 92 girls in spring; 78 in fall.
‖ 72 boys in spring; 56 in fall.

## DISCUSSION

In agreement with the findings of Young and Pilcher (6) and of Trulson, Hegsted, and Stare (7), younger children (four to nine years of age) ingested diets that more fully met their allowances than did the older children (ten to fifteen years of age). There are probably a number of reasons for this. In this study the parents kept the food records of the children in the lower grades, and as a result they may have been more accurate or easier to interpret for calculation than the records kept by the older children. Another factor may be the wide differences in maturity or body size of the adolescent group. It is conceivable that some children of this age group would not physically require as high an intake as the allowances suggest, while others may require more.

The allowances were not intended to be used for individual comparisons and are based on the needs of the middle year for each group and on the average

TABLE 3

*Difference between spring and fall nutrient intake**

| NUTRIENT | CHILDREN 4 TO 6 YEARS (N = 61) | | | CHILDREN 7 TO 9 YEARS (N = 58) | | | CHILDREN 10 TO 12 YEARS (N = 41) | | | CHILDREN 13 TO 15 YEARS (N = 116) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean difference | Standard deviation | "t" | Mean difference | Standard deviation | "t" | Mean difference | Standard deviation | "t" | Mean difference | Standard deviation | "t" |
| Calories | 34.31 | 43.71 | 0.78 | 62.10 | 45.02 | 1.38 | 7.27 | 5.53 | 1.31 | 63.14 | 66.56 | 0.95 |
| Protein (gm.) | 1.75 | 1.58 | 1.11 | 2.25 | 1.43 | 1.58 | 1.89 | 1.91 | 0.99 | 3.01 | 1.46 | 2.06† |
| Calcium (mg.) | 24.33 | 39.86 | 0.61 | 20.38 | 31.74 | 0.64 | 62.90 | 46.60 | 1.35 | 54.43 | 29.40 | 1.85 |
| Iron (mg.) | 0.50 | 0.25 | 1.98 | 0.36 | 0.29 | 1.26 | 0.73 | 0.46 | 1.61 | 0.15 | 0.28 | 0.54 |
| Vitamin A (I.U.) | 211.46 | 275.60 | 0.77 | 875.95 | 414.65 | 2.11† | 252.80 | 573.53 | 0.44 | 524.34 | 409.61 | 1.28 |
| Thiamine (mg.) | 0.03 | 0.03 | 1.08 | 0.01 | 0.03 | 0.46 | 0.06 | 0.04 | 1.72 | 0.003 | 0.09 | 0.03 |
| Riboflavin (mg.) | 0.07 | 0.07 | 1.11 | 0.05 | 0.05 | 1.00 | 0.03 | 0.08 | 0.43 | 0.13 | 0.05 | 2.63‡ |
| Niacin (mg.) | 0.36 | 0.29 | 1.24 | 0.50 | 0.30 | 1.67 | 0.77 | 0.34 | 2.30† | 0.08 | 0.28 | 0.28 |
| Ascorbic acid (mg.) | 2.79 | 2.65 | 1.05 | 3.59 | 3.30 | 1.09 | 8.46 | 4.42 | 1.92 | 1.37 | 3.25 | 0.42 |

* Student's "t" test applied (5).

† Significant at 5% level.

‡ Significant at 1% level.

weight at this middle year. The children that we found grouped in the range of 1 to 60 per cent intake of the allowances were about the same in height and weight as the entire group and fell within or above the weight range suggested by the National Research Council, so we do not feel that this is the reason for the seemingly poorer dietaries of the children. As the children grow older they are usually less supervised in their food habits. We found that many of the older children skipped a meal because they were too busy with recreation activities, such as playing ball, to stop and eat. They often missed breakfast and their noon lunches were more varied than those of the lower grades. They usually had money to buy lunches which too often were of the hot-dog, soft-drink, candy-bar type. This may in part account for their poor dietary performance.

No essential differences in nutrients available in the fall and in the spring were found even in the rural community, where this might be expected if the family produced much of their own food. Young and Pilcher (6) have reported that vitamin A intake was statistically higher in the fall than the spring for the residential groups they studied.

## SUMMARY

Young children, four to nine years of age, had a better nutrient intake when judged by the recommended allowances than children ten to fifteen years old. There was an inverse relationship between age and adequacy of nutrient intake observed for all four age groups considered. The adolescent girls, thirteen to fifteen years, tended to eat diets lower in protein, iron, thiamine, riboflavin, niacin, and ascorbic acid than did the adolescent boys.

No significant differences were found between the fall and spring intake of the majority of the nutrients either in any one age group or in the groups as a whole.

The calcium and ascorbic acid content of the diets fell below the Recommended Dietary Allowances more often than the other seven nutrients studied.

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*New Use for Milk—As Fertilizer*

At Montana State College, Dr. F. M. Harrington has made experiments using milk as a fertilizer for tomatoes, Bermuda onions, and sugar beets. Milk has been shown to increase growth development and stem strength of the plants, as well as improving their quality and yield. It appears to increase bacterial action by at least 25 per cent, breaking down organic matter faster and making the nutrients more available. Dr. Harrington points out that milk, when used with regular fertilizers, seems to help the plants to utilize nitrogen and phosphorus better. The investigation was reported at a course for greenhouse operators at Washington State College, Pullman.—*From Food Field Reporter, July 31, 1950.*

# Progress in Cereal Enrichment

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SO-CALLED "enrichment" of white bread and flour in the United States began in May, 1941 under the impetus of the support of the, then newly formed, Committee on Food and Nutrition of the National Research Council which later became the Food and Nutrition Board. It also had the aid and sanction of the United States Food and Drug Administration through the issuance of appropriate definitions and standards for the enriched products. Enriched white flour contains per pound not less than 2 mg. thiamine, 1.2 mg. riboflavin, 16 mg. niacin, and 13 mg. iron. Enriched bread, on a dry weight basis, contains equivalent amounts of these four nutrients.

The movement has had the cordial support of the major part of the milling and baking industries, and the practice of enrichment has been accepted since 1942 or 1943 for three-fourths or more of the total output of white flour and bread. Only small and diminishing fractions remain unenriched. South Carolina in 1942 initiated mandatory state legislation requiring enrichment of all such products sold in the state. Twenty-five other states, as well as Puerto Rico and Hawaii, have since adopted equivalent legislation. The history of this progress is recorded in a series of publications by the National Research Council and subordinate committees (1–3).

## NATURAL VS. SYNTHETIC FOODSTUFFS

These documents contain many allusions to opposition offered to enrichment and particularly to mandatory state enrichment legislation. In the main this opposition stemmed from the idea that the use of whole wheat and other natural protective foods is preferable to the use of synthetics. A group of agrarians, notably dairy interests, sought to alarm the public with the notion that artificial substitutes for natural foods would undermine the markets for the latter type of products. Particularly it was falsely alleged that enrichment discouraged the use of nonfat milk solids in bread. This was disproved by a survey of the use of milk in bakeries conducted in 1948 by the University of Wisconsin (4). In consequence, the American Dry Milk Institute has recently withdrawn its opposition to enrichment legislation.

Actually, the prospect that the chemical factory can significantly replace the farm as a source of foodstuffs is illusory and remote. Human beings, like other animals, require large quantities of food to satisfy their caloric needs. These foods must contain large proportions of carbohydrates, fats, and proteins. Not one of these components can be made synthetically in competition with the farm. The proteins cannot be made synthetically at all, and only a token synthesis of carbohydrates is possible. The proteins must be in part of animal origin and include an appropriate selection of eight or ten amino acids. Foods also contain a variety of vitamins and minerals essential to life, and we get most of them free in a well chosen blend of natural foods.

## PURPOSE OF ENRICHMENT

Accordingly, artificial enrichment must be regarded only as a useful supplement to correct outstanding shortages created by bad food customs and by economic pressures on the poor. Yet enrichment is important, because 72 per cent of the calories currently consumed by the human race are composed of cereals—rice, wheat, corn, and other lesser grains. Most of the rice and wheat are milled to whiteness in preparation for human use. This is almost necessary to preserve them under present modes of food distribution, but it entails a large loss of vitamins and minerals essential for the consumer's health. Corn or maize is the cheapest of all human foods in areas where it grows well but, even in the whole grain form, it is deficient in niacin and tryptophan and so is conducive to pellagra when used in high proportion. Proper enrichment can quickly and very cheaply correct these faults, and to scorn it is as foolish as to refuse to use artificial light because sunlight is more illuminating. However, there is no more danger that synthetic foods will replace farm foods than there is that lamps will displace the sun.

Recent important evidence of the value of enrichment has come to us from Newfoundland. Enrich-

ment of flour was introduced there in 1944. Its introduction was preceded by two clinical surveys in the St. Johns' area and at Norris Point respectively. Each of these surveys was repeated in 1948 (5–7), revealing substantial betterment of those deficiency symptoms which enrichment could repair. Blood levels of these nutrients were also raised, and an increased liveliness of the children was conspicuous. By contrast, scurvy symptoms and low ascorbic acid levels remained unimproved.

Enrichment of white flour and bread in the United States, though not yet quite universal, may be regarded as an accomplished fact. It is unlikely to be abandoned, and a future possible depression will doubtless prove to the most skeptical its value for the low-income segments of the population in particular. Where do we go from here?

### WILLIAMS-WATERMAN FUND

Before discussing present and possible extensions of the basic enrichment idea, it is in order to tell you of the Williams-Waterman Fund for the Combat of Dietary Diseases. It came into being in 1940 deriving all its revenues from royalties on the synthetic manufacture of thiamine under patents assigned by the author and his associates to Research Corporation from 1935 to 1937. This corporation uses all of its net earnings for the support of research and kindred activities. By agreement, half of the thiamine royalties go into the Williams-Waterman Fund and are used for research and practical programs related to human nutrition, a fourth is used for the general purposes of Research Corporation, and the remaining fourth is divided among the inventors and charities which they designate. When the author was invited by the National Research Council to serve as Chairman of the Committee on Cereals, he felt the obligation to divest himself of any increment of income which might accrue from the success of the enrichment program and did so by irrevocable assignment to the American Friends Service Committee.

The Williams-Waterman Fund has disbursed almost a million dollars, largely for a diversity of research work in nutrition and metabolism in approximately fifty colleges, universities, and medical institutions and is currently expending all its income for these and similar purposes. In passing on such applications, it has the advice of Dr. C. G. King, Dr. W. H. Sebrell, Dr. Norman Jolliffe, Dr. H. C. Sherman, and Robert E. Waterman as specialists in the field, in addition to Dr. J. W. Barker, Dr. E. R. Buchman, Dr. C. D. Coryell, Howard Coonley, and C. H. Schauer representing Research Corporation and the principal inventors.

From the outset it has been the policy of the Fund to encourage practical measures of nutritional reform. To this end about one-fifth of its total outlay has been directed to the promotion of the enrichment or fortification of corn and rice.

While the Food and Nutrition Board of the National Research Council has direct responsibility only with reference to the nutritional well being of the people of the United States and its possessions, it has a sympathetic interest in similar objectives in other lands and desires to promote international comity in matters related to food. Accordingly, the Board and the Williams-Waterman Fund have informally cooperated in carrying forward the application of cereal fortification wherever it seemed appropriate. Often the author has been a little uncertain whether he was acting in a particular instance as a member of the Board or as Chairman of the Fund.

### CORN ENRICHMENT IN THE UNITED STATES

The first important extension of the enrichment idea applied to corn. Unfortunately, corn enrichment in the United States did not receive a warm welcome from the corn milling industry, largely due to division within the industry. The midwestern corn millers, who produce degerminated corn meal (saving the germ for corn oil), find themselves in active competition with the small southern miller who grinds the germ with the corn. The latter often operates his mill as an adjunct to a farm, a grocery store, or a gasoline filling station, often grinding a farmer's corn for toll. He is not subject to high rents or wage scales, and has little in common with midwestern producers.

Five southern states, led by South Carolina, passed laws between 1943 and 1946 requiring the enrichment of degerminated corn products (from the West) but exempting whole corn products (of local origin). This did not help good relations, but it has resulted in the general enrichment of the former type of products. The Food and Nutrition Board recommended also whole corn enrichment, and Williams-Waterman decided to invest some money in promoting the enrichment of whole corn in the small mills of the South. Corn enrichment is essentially a southern problem for only there does corn often displace wheat as a staple cereal especially in more remote and mountainous areas. Elsewhere in the United States corn rates as a lesser human food.

Beginning in South Carolina under the able leadership of Dr. E. J. Lease at Clemson Agricultural College, whole corn enrichment in the small mill has been successfully attacked. First, it was necessary to devise and make by the hundreds, an automatic "feeder" to deliver a proper stream of enrichment mixture at the rate required by the capacity of the mill. Next Dr. Lease had to work out an enriching mixture adapted to the feeder. Fortunately, he could add calcium carbonate to furnish much needed calcium in addition to the ingredients regularly used in flour. He is still forced to make and distribute the premix to the little millers, for no commercial firm has been found who will bother with all those little orders. It has meant a C.O.D. mail order business.

It was also necessary to teach the people to ask for enriched meal and at the same time to persuade the millers to pay $25 for a feeder and to buy and use the premix. It has been slow work, but after seven years, 1000 millers all over South Carolina and Alabama are regularly enriching their corn meal, and the practice is invading other southern states where there is perhaps a total of 6000 or 7000 additional small mills.

For this missionary work among the housewives and the millers, it is essential to use the services of persons who are already acquainted with them. The county agent and the home demonstration agent of the Agricultural Extension Service have rendered invaluable service in the two states where the program has so far been concentrated. These friends of the farmers are ideally fitted to extend enrichment throughout the South. However, there seems to be an appalling amount of red tape, as well as conflict of other duties, in enlisting them in this work. The work is, nevertheless, progressing, and South Carolina has recently found it possible to amend its corn enrichment law, effective September 1, 1949, so as to make it applicable to whole corn meal as well as the degerminated product. The millers and the people now know its merits well enough to give it the popular support which is necessary to its enforcement. If it is extended throughout the South and flour and bread enrichment is maintained, pellagra will be an unknown disease to the coming generation.

### RICE ENRICHMENT

Now for rice and beriberi. Rice is not a major food for most citizens of the United States, though it is eaten in substantial quantities especially in the coastal areas of the southern states. Therefore, a national attack on the problem has not appeared justified. Nevertheless, the Food and Nutrition Board authorized and published a study of the "Nutritional Improvement of White Rice" (8) in 1945, with especial reference to the United States rice industry.

Commercial interest in the subject has been evinced by the adoption in recent years of parboiling processes at Houston, Sacramento, and Stuttgart, Arkansas. Parboiling is an ancient traditional practice in much of India and applies to perhaps two-thirds of India's rice. It consists essentially of steeping the rough rice (paddy) in hot water for some hours, drying it in the sun, and then shelling and milling it in the usual way. Presumably it was originally done to loosen the hulls, but it serves an excellent nutritional purpose. The water permeating through the bran coats dissolves the vitamins and minerals and in considerable part leaves them in the interior of the grain after it is milled. Parboiling or "converting" rice in the United States is a modernized version of this process.

Parboiled rice is popular in most parts of India, but is eschewed in certain areas and by certain elements of population. Well parboiled rice is nutritionally an excellent product and is quite acceptable to many western palates. However, it has had a trial in the Philippines, Puerto Rico, and Cuba where it has not met with favor. Whether this is due to inescapable modification of flavor or to inferior processing and storage which has permitted some deterioration, it is difficult to say. It requires more cooking than ordinary rice which may be a factor where fuel is scarce.

More recently there has been established at Crowley, Louisiana, a plant for the artificial preparation of a premix for fortifying rice. It follows the scheme of Furter *et al.* (9) whereby rice is wet with a mixture of thiamine, niacin, and iron in water solution, is then dried and coated with a film of zein from alcoholic solution. The dried product may be so highly fortified that 1 lb. mixed with 200 lb. rice suffices to bring up the levels of the added nutrients to those of brown rice. The zein film prevents the loss of vitamins when the rice is rinsed. This fortified rice is not distinguishable from white rice either raw or cooked. Because riboflavin discolors the grains of the premix so much that it is to be feared the housewife will pick them out and discard them, thinking they are spoiled grains, it is not included in the fortified premix. Otherwise, the rice meets the levels required in the United States for enriched flour and enriched corn meal. The sale of this product has not been vigorously pushed by the producers.

### PHILIPPINE EXPERIMENT WITH ENRICHED RICE

In order to view the rice situation, the author in 1946 visited the Orient where nearly half the population subsists largely on rice as their principal food. It was evident that the industrialization of the East has increasingly replaced the former primitive methods of rice milling rendering milled rice whiter than ever before. An opportunity was sought for a large scale experiment in feeding a substantial population with a nutritionally improved form of rice.

This opportunity was found in Bataan Province, Philippine Islands. This province was particularly well adapted to this purpose, for it is bounded on three sides by water, has no railroad, and only one first class road connecting it with Manila and other provinces. Thus it was possible to control rice shipments into and out of the province and among its twelve towns. Seven of these took part in the experiment—the other five serving as controls. Because of Filipino preference for white rather than parboiled rice and because a much smaller investment would suffice, the fortified product using the Furter premix was decided upon rather than the parboiled product. In the experimental area there are twenty-six rice mills which supply the local

markets. The operators of these mills cooperated in the experiment and were supplied with mixing machinery so that supplies of the enriched premix shipped from the United States could be mixed with the rice they regularly milled and sold to the people. The mills in the control zone continued to distribute ordinary white milled rice to their patrons during the experiment. Thus, under the guidance of Dr. Juan Salcedo, Jr. of the Philippine Health Service, and with the financial aid of Hoffmann-LaRoche Inc., United States government appropriations, and the Williams-Waterman Fund, provision was made to supply about 70,000 people exclusively with fortified rice at competitive prices for two years.

## RESULTS

Prior to the beginning of the experiment, a clinical survey of the population was conducted (10). During the survey period in 1947, 12,400 persons were examined and 1580 cases of suggestive to frank beriberi were encountered, of which 245 were severe or moderately severe. During this time, there were 106 deaths from beriberi in the entire province. The mortality rate from beriberi for the year 1947 was 132 per 100,000 for the entire islands and 166 per 100,000 for Bataan. About two-thirds of the deaths were those of infants. These figures are in keeping with previous mortality statistics, both for Bataan and for the Philippines as a whole, where beriberi ranks second only to tuberculosis as a cause of death. On October 1, 1948, distribution of enriched rice was begun in the experimental area described above. A year later, beriberi deaths had decreased by 67.3 per cent, whereas in the control area they had increased 2.4 per cent. In the experimental area, enriched rice had apparently saved the lives of 111 people in one year. Even more impressive results occurred in the second year of the experiment. For the seventh quarter of the experiment (April 1 to June 30, 1950), not one death from beriberi was recorded in any of the seven municipalities of the experimental zone.

The full effect of enrichment would have been apparent sooner, if more time had not been required to reach infants too young to eat the enriched rice. During the first year when the whole mortality rate had dropped 67 per cent, infant deaths decreased by only 50 per cent. By the end of the second year, the mothers' tissues had been built up so that their milk could carry all the needed vitamins to their babies, and the full effect of enrichment was reflected in a greater decrease in infant mortality.

Also, in the clinical resurvey begun in July, 1949—only nine months after the experiment began—some 12,000 people, mostly adults, were examined. Nearly 11,000 of them were the same individuals inspected in 1947. Almost 90 per cent with symptoms two years before were found to be much better, most of them symptom-free. Since these people were a fair sample of the entire population, these findings mean that the health of at least 3500 people in the experimental area had been measurably improved, and thousands more must have been benefited to some degree.

The new rice has been well received by the people, the rice millers have been cooperative, and the Philippine government is exhibiting much interest in the possibility of adopting fortification as a general measure throughout the Republic. There is prospect that this can be done at an annual cost of from 25 to 30 cents per person. The next step of extending enriched rice supplies to 2,000,000 people in other beriberi-endemic provinces has already been begun. A plant has been built in Manila to prepare the premix from Philippine white rice and vitamins imported from the United States. Additional mixing equipment or feeders will be procured by the National Rice and Corn Corporation which will distribute them to millers in the new areas. It is estimated that it will cost the people of these provinces 1 centavo per ganta (about 1/10 cent per pound) over the price of the unenriched rice. The cost of enrichment in Bataan is currently about 35 cents per person per year. This includes all costs of the program: the cost of the new premix plant in Manila; of the mixing equipment, chemicals, and vitamins; of overhead, supervision, depreciation of machinery, and a modest profit for the rice mill owners and the Philippine government's National Rice and Corn Corporation.

It is hoped that this Philippine project may help to point the way for other Oriental countries. The speedy and significant results obtained in Bataan are in striking contrast to the relatively negligible effects of seeking to alter rice milling methods and food habits which have been going on in Asian countries for the past forty years. The importation of synthetic vitamins may be more difficult to justify in countries outside the dollar area, and synthesis of vitamins within the country of consumption will require considerable development of the chemical industry in those countries. However, since the cost of artificial fortification itself is insignificant even in terms of an Oriental's income, the measure certainly should be considered wherever the incidence of beriberi is substantial.

In the meantime, it seems important to maintain progress in rice improvement in the United States, for, even though only 2 per cent of the world's rice crop is grown in this country, our technology is more advanced and the rest of the world looks to us for leadership. Accordingly, the Food and Nutrition Board passed in May, 1949, a resolution commending rice improvement to those states with comparatively high consumption rates, especially Louisiana, Florida, Georgia, and the Carolinas, where the use of rice amounts to 20 to 40 lb. per capita per year.

### RICE SITUATION IN PUERTO RICO AND CUBA

To the same end the author visited Puerto Rico and Cuba in May, 1949 and conversed with government officials, rice brokers, and civic leaders about improving the rice supply of these two islands.

Puerto Rican rice production is negligible, but the consumption is 140 to 145 lb. per capita as compared with about twice that amount in the Philippines. The use of beans of various sorts in association with rice is an important dietary corrective in Puerto Rico. Also, the school lunch program and the free distribution of milk to pre-school children are extensive and substantial. For these reasons, beriberi is not a primary problem as in the Philippines. Nevertheless, since Puerto Rico requires by law the enrichment of all flour, and since rice consumption by the masses is substantially higher than that of wheat products, it seems logical and desirable to take similar measures with rice.

To avoid prejudgment as to the relative merits of parboiled versus artificially fortified rice and to allow room for the utmost improvement of each type of product, the author suggested to Puerto Rican authorities consideration of legislation which would prohibit the sale of rice other than the following:

(a) Brown rice containing per pound not less then 1.35 mg. thiamine, 0.3 mg. riboflavin, 16 mg. niacin, and 13 mg. iron.

(b) Parboiled rice containing per pound not less than 1.2 mg. thiamine, 0.15 mg. riboflavin, 16 mg. niacin, and 13 mg. iron.

(c) Fortified rice containing per pound not less than 2 mg. thiamine, 16 mg. niacin, and 13 mg. iron.

The lower level of thiamine proposed for brown and parboiled rice as compared with that for fortified rice is justified on the ground that the latter contains less riboflavin and other B vitamins.

Puerto Ricans prefer short and medium length grain varieties of rice. They also attach much importance to a white and glossy finish so that glucose and talc coatings are much used for the Puerto Rican trade.

In Cuba, rice is used much as in Puerto Rico, often in association with beans. The consumption, however, is smaller and is approximately equal to that of flour, viz., 80 lb. per capita per annum. Corn is also an important food amounting to perhaps 40 to 50 lb. per capita. There is an appreciable rice production in Cuba to the extent of about one-fifth of the total consumption. Medium-to-long grained varieties are preferred.

Cuba certainly should consider the exclusion of unenriched flour since the enriched variety can be had for only 1 per cent more per hundred weight from the United States which now furnishes nearly all the flour imported. Legislation about rice, such as that suggested for consideration in Puerto Rico, should also be weighed as a measure for Cuba.

### RICE IN BRAZIL

Interest in rice improvement in Brazil is also rising, and American rice millers are urged to meet these genuine needs in neighboring lands by offering freely rice of nutritionally better quality at competitive prices. Rice improvement should not be regarded as an opportunity for sale of limited quantities at fancy prices to the silk-stocking trade. This cannot be justified as a public health measure, because the silk-stocking trade is least in need of nutritional betterment. It should rather be regarded as an economical basic measure to hold and expand present outlets for large volumes of rice for the masses. The wheat millers have accepted this position regarding enrichment of white flour and have had no reason for regrets. Basic improvement of white cereals is inevitable throughout the world.

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To illustrate how firmly entrenched rice is in Chinese culture, Dr. H. P. Yang, FAO Rural Welfare Officer, cites these Chinese idioms: When a man is looking for a job, he is said to be "searching for a rice bowl." If a Chinese gets a good job, his friends tell him he has a "good rice bowl." But a man with a soft job, who is well paid but does little or nothing, is known sneeringly as a "rice barrel," meaning that he is good for nothing but storage.—*From FAO Radio Newsletter, Vol. 1, May, 1950.*

# Effect of Different Types of Breakfasts on Thiamine and Niacin Excreted by Men[1]

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IN THE course of an experiment studying certain physiologic responses (1) of young men on a good diet in which the type of breakfast varied, data were collected on the utilization of nitrogen, amino acid nitrogen, calcium, phosphorus, iron, cobalt, thiamine, and niacin. This paper reports the data on thiamine and niacin intake and urinary excretion.

The subjects were ten male students varying in age from twenty-one to thirty-five years at the State University of Iowa. Physical examination showed that they were in excellent physical condition, and, with the exception of two who were overweight, they conformed to average height and weight standards. They carried full academic schedules but did not participate in any sport which demanded unusual physical activity.

With one exception (a married student), all subjects lived in one of the University housing cottages. Subjects ate all their meals in the University Hospital dining room. All meals were prepared in the Diet Kitchen, under the supervision of a dietitian.

During the first two weeks of the fall semester, the subjects chose their meals in the cafeteria with no restrictions as to amounts or costs. These meals, since they reflected the food habits of the individuals, served as the basis for the weighed diets in the experimental periods. Weight changes of the subjects during this period of choice were used as an index of caloric requirements.

## PROCEDURE

The ten weeks preceding the Christmas vacation and a second ten-week period after classes reconvened were used as the experimental period.

During this time, the group was divided at breakfast into two sections of five members each. Two breakfast regimens, both of which provided one-fourth of a day's total protein and calories, were used. Cereal and milk furnished the protein for one breakfast, which will be called the "cereal breakfast," while bacon, one egg, and milk provided the protein for the other type, which will be termed the "bacon and egg breakfast" (Table 1). While one section was given the bacon and egg breakfast, the other five subjects ate the cereal breakfast. The sections were then rotated so that the subjects served as their own controls.

All subjects ate the same noon and evening meals, and the total daily diet was planned to supply 100 gm. protein, 3000 calories, 2400 mcg. thiamine, and 15 mg. niacin, with individual adjustments being made by using skim milk, butter, desserts, sugar, dressings, and gravy. In Table 2 are given the patterns for the noon and evening meals.

### *Collection of Specimens*

After four to six weeks on the weighed diets, collections of urine were made for three weeks and of stools for the second week of this period. Food analyses were made throughout these periods.

*Food:* An extra diet was weighed each day, placed in 0.1 N sulphuric acid in a glass beaker and digested at low heat for 12 hr. The food was made into a slurry with a Waring Blendor and adjusted to volume with 0.1 N sulphuric acid.

*Urine:* Collections of 24-hr. urine were made in glass jars containing glacial acetic acid. After measuring, the *p*H was adjusted to 4.5 and toluol added.

*Stools:* Collection periods were marked by the use of carmine. Air tight enameled containers were used for collection. The specimens were weighed and mixed.

Aliquots of the food, urine, and stool specimens were stored at 0°C. for analysis.

[1] This work was generously supported by a research grant from the Cereal Institute, Inc., Chicago. Received for publication, January 12, 1951.

[2] Submitted in partial fulfillment of the requirements for the degree of Master of Science in the Department of Nutrition, Graduate College, State University of Iowa.

TABLE 1

*Sample menus for cereal and bacon and egg breakfasts*

| FOOD | WEIGHT |
|---|---|
| **Cereal Breakfast** | |
| | *gm.* |
| Grapefruit juice | 100 |
| Cereal | 100 |
| Toast | 60 |
| Butter | 10 |
| Milk | 480 |
| Sugar | 10 |
| Calories | 750 |
| Protein (gm.) | 25 |
| Thiamine (mcg.) | 535 |
| Niacin (mg.) | 3.57 |
| **Bacon and Egg Breakfast** | |
| Grapefruit juice | 100 |
| Egg | 50 |
| Bacon | 30 |
| Toast | 60 |
| Butter | 20 |
| Milk | 240 |
| Jelly | 20 |
| Calories | 746 |
| Protein (gm.) | 24 |
| Thiamine (mcg.) | 506 |
| Niacin (mg.) | 2.75 |

TABLE 2

*Sample menus for the noon and evening meals**

| FOOD | WEIGHT |
|---|---|
| **Noon Meal** | |
| | *gm.* |
| Roast pork | 100 |
| Gravy | 50 |
| Mashed potato | 150 |
| Spiced beets | 100 |
| Celery | 50 |
| Olives | 20 |
| Fudge ice cream | 125 |
| Milk | 240 |
| Bread | 25 |
| Butter | 10 |
| Calories | 1107 |
| Protein (gm.) | 45 |
| Thiamine (mcg.) | 1186 |
| Niacin (mg.) | 6.44 |
| **Evening Meal** | |
| Cold meat | 75 |
| Potato chips | 15 |
| Mixed fruit salad | 100 |
| Peas | 100 |
| Rolls | 30 |
| Butter | 10 |
| Blackberry pie | 125 |
| Milk | 240 |
| Calories | 1190 |
| Protein (gm.) | 30 |
| Thiamine (mcg.) | 661 |
| Niacin (mg.) | 5.24 |

* Total for a day, including one of breakfasts given in Table 1: calories, 3000; protein, 100 gm.; thiamine, 2400 mcg.; and niacin, 15 mg.

### *Analysis*

*Food:* The food was subjected to incubation at 37°C. for 12 hr. with 10 per cent clarase. Thiamine determinations were made by the thiochrome method of Hennessy and Cerecedo (2).

*Urine:* Thiamine analyses were conducted by the same method as that used for the food specimens. In analyzing for niacin, urine was analyzed for $n^1$-methylnicotinamide by the fluorometric method developed by Huff and Perzweig (3) based on the original method of Najjar and Wood (4).

The Coleman photofluorometer was used to read fluorescence.

## RESULTS

### *Thiamine*

A comparison of the calculated and analyzed figures for the thiamine content of the food shows a surprisingly close agreement (Table 3). In general, the food values given by Bowes and Church (5) were used for these calculations. When food combinations were made, our own analytical values from previous studies were available.

The average daily intake and excretion of thiamine for the subjects are given in Table 4.

The intake of thiamine of each subject averaged .67 mg. per 1000 calories with a range from .55 to .75 mg. for the group on the cereal breakfast and .66 mg. per 1000 calories with a range from .55 to .80 mg. when on the bacon and egg breakfast regimen. The average daily intake of thiamine during the cereal breakfast period was 1968 mcg. with a range from 1674 to 2293 mcg. On the bacon and egg breakfast period, the average daily intake was 1986 mcg., ranging from 1733 to 2396 mcg.

The cereal breakfast contributed an average of 521 mcg. thiamine per day and the bacon and egg breakfast, the same amount—522 mcg. per day. On the cereal breakfast, the standard deviation from the mean was 81.2; on the bacon and egg breakfast, it was 48.2. This difference in standard deviation is, no doubt, due to the fact that a variety of cereal was used while fruit was the only variable in the bacon and egg breakfast.

While on the cereal breakfast, the subjects excreted an average of 191 mcg. urinary thiamine per day with a range from 132 mcg. to 261 mcg. The excretion on the bacon and egg breakfast was not sig-

TABLE 3

*Comparison of analyzed and calculated thiamine content of diet*

| SUBJECT | THIAMINE | | | |
|---|---|---|---|---|
| | Calculated | Analyzed | Difference | |
| **Cereal Breakfast Period** | | | | |
| | *mcg.* | *mcg.* | *mcg.* | *%* |
| O.E. | 1674 | 1648 | 26 | 1.5 |
| W.F. | 1980 | 1951 | 29 | 1.5 |
| G.H. | 2184 | 2152 | 32 | 1.5 |
| C.J. | 2048 | 2030 | 18 | 0.9 |
| T.L. | 1968 | 1924 | 44 | 2.2 |
| F.N. | 2105 | 2107 | 2 | 0.1 |
| T.W. | 2293 | 2264 | 29 | 1.3 |
| L.W. | 1979 | 1954 | 25 | 1.3 |
| M.W. | 1684 | 1648 | 26 | 1.6 |
| N.Z. | 1777 | 1727 | 50 | 2.8 |
| Average | 1968 | 1931 | 37 | 1.9 |
| **Bacon and Egg Breakfast Period** | | | | |
| O.E. | 1864 | 1888 | 24 | 1.3 |
| W.F. | 2022 | 1912 | 110 | 5.0 |
| G.H. | 2396 | 2354 | 42 | 1.7 |
| C.J. | 1808 | 1738 | 70 | 3.8 |
| T.L. | 2009 | 1980 | 29 | 1.4 |
| F.N. | 2009 | 1836 | 173 | 8.0 |
| T.W. | 2287 | 2226 | 61 | 2.7 |
| L.W. | 1733 | 1664 | 69 | 3.9 |
| M.W. | 1834 | 1810 | 24 | 1.3 |
| N.Z. | 1898 | 1885 | 13 | 0.7 |
| Average | 1986 | 1929 | 57 | 2.8 |

TABLE 4

*Average daily thiamine intake and urinary excretion (normal men)*

| SUBJECT | CALORIC INTAKE | THIAMINE | | | |
|---|---|---|---|---|---|
| | | Intake | | Urinary excretion | |
| | | Actual | Proportionate | | |
| **Cereal Breakfast Period** | | | | | |
| | | *mcg.* | *mg./1000 calories* | *mcg.* | *%* |
| O.E. | 2196 | 1674 | .75 | 187 | 11.1 |
| W.F. | 3010 | 1980 | .65 | 165 | 8.3 |
| G.H. | 3606 | 2184 | .60 | 206 | 9.4 |
| C.J. | 2881 | 2048 | .55 | 136 | 6.6 |
| T.L. | 3001 | 1968 | .66 | 150 | 7.6 |
| F.N. | 3000 | 2105 | .70 | 218 | 10.4 |
| T.W. | 3643 | 2293 | .61 | 233 | 10.2 |
| L.W. | 2628 | 1979 | .74 | 217 | 11.0 |
| M.W. | 2196 | 1674 | .75 | 132 | 7.9 |
| N.Z. | 2628 | 1777 | .66 | 261 | 14.7 |
| Average | | 1968 | .67 | 191 | 9.7 |
| **Bacon and Egg Breakfast Period** | | | | | |
| O.E. | 2358 | 1864 | .80 | 170 | 9.1 |
| W.F. | 3008 | 2022 | .63 | 201 | 9.9 |
| G.H. | 3565 | 2396 | .66 | 187 | 7.8 |
| C.J. | 3160 | 1808 | .55 | 161 | 8.9 |
| T.L. | 3000 | 2009 | .66 | 155 | 7.7 |
| F.N. | 3000 | 2009 | .60 | 221 | 11.0 |
| T.W. | 3586 | 2287 | .62 | 238 | 10.4 |
| L.W. | 2840 | 1733 | .58 | 191 | 11.0 |
| M.W. | 2358 | 1834 | .76 | 126 | 6.9 |
| N.Z. | 2684 | 1898 | .70 | 218 | 11.5 |
| Average | | 1986 | .66 | 187 | 9.4 |

nificantly different, being 187 mcg., with a range from 126 to 238 mcg. The standard deviation of thiamine excretion for the cereal breakfast was 41, and for the bacon and egg breakfast period, 32.

These results are similar to those of Melnick *et al.* (6) who reported an average daily excretion of 161 mcg. and a range of 86 to 310 mcg. for a group of young college men on an intake of 2 mg.

The percentage of the thiamine intake during the cereal breakfast period which was excreted in the urine averaged 9.7 with a range from 6.6 to 14.7; for the bacon and egg breakfast period, the average was 9.4, ranging from 6.4 to 11.5.

Harris (7) reported an excretion of 5 to 8 per cent; Carden *et al.* (8), 10 to 40 per cent; and Melnick *et al.* (6), 20 per cent. Keys *et al.* (9) found that with intakes below .33 mg. per 1000 calories, the average excretion was 7 per cent, while 10 per cent was excreted when the intake was increased.

### *Niacin*

The calculated intake of niacin and the urinary excretion of n$^1$-methylnicotinamide as analyzed for the individual subjects are given in Table 5. The intakes averaged 16.26 mg. with a range from 13.57 to 18.06 during the cereal breakfast period. For the bacon and egg breakfast period, the average intake was 16.24 mg., ranging from 14.53 to 18.91. The cereal breakfast contributed 2.75 mg. and the bacon and egg regimen, 2.65 mg.

The daily average excretion of n$^1$-methylnicotinamide for the ten subjects during the cereal breakfast period was 7.04 mg. with a range from 5.38 to 9.26. The average excretion during the bacon and egg breakfast period was 7.03 mg. with a range from 5.15 to 9.84 mg. The average excretion was 43 per cent of the intake for both periods.

Of the niacin metabolites excreted in the urine, 94 to 95 per cent was in the form of n$^1$-methylnicotinamide (10). Najjar and Wood (4) found that 25 to 50 per cent of the intake of niacin was excreted as n′methyl-nicotinamide in amounts that varied from 3 to 17 mg. with an average of 7 mg. Similar results are reported by other workers (11–13). Whether the

TABLE 5

*Average daily intake and urinary excretion of n¹-methylnicotinamide (normal men)*

| SUBJECT | NIACIN | | |
|---|---|---|---|
| | Calculated intake | Urinary excretion | |
| **Cereal Breakfast Period** | | | |
| | *mg* | *mg.* | % |
| O.E. | 13.95 | 7.09 | 50 |
| W.F. | 16.46 | 5.38 | 33 |
| G.H. | 17.65 | 9.26 | 52 |
| C.J. | 17.34 | 6.59 | 38 |
| T.L. | 16.50 | 6.48 | 39 |
| F.N. | 18.00 | 8.73 | 49 |
| T.W. | 18.06 | 6.53 | 36 |
| L.W. | 16.45 | 5.93 | 36 |
| M.W. | 13.57 | 5.88 | 43 |
| N.Z. | 14.57 | 8.39 | 58 |
| Average | 16.26 | 7.03 | 43 |
| **Bacon and Egg Breakfast Period** | | | |
| O.E. | 15.99 | 7.09 | 44 |
| W.F. | 16.40 | 6.05 | 36 |
| G.H. | 18.91 | 9.84 | 52 |
| C.J. | 14.77 | 6.16 | 42 |
| T.L. | 16.34 | 6.05 | 37 |
| F.N. | 15.61 | 7.95 | 51 |
| T.W. | 18.23 | 7.24 | 39 |
| L.W. | 14.53 | 5.15 | 35 |
| M.W. | 15.39 | 6.63 | 43 |
| N.Z. | 16.25 | 8.20 | 50 |
| Average | 16.24 | 7.04 | 43 |

excretion is proportional to the intake is not yet established.

In this study, both the average amount excreted, 7.04 mg., and the 43 per cent average excretion confirm these findings, but the levels of intake varied so little that no conclusion can be drawn as to the relation between intake and output. One subject N. S., during the cereal breakfast period excreted 58 per cent, and his thiamine excretion was also out of line in this period. No explanation can be made.

## SUMMARY AND CONCLUSION

Ten college men were on an adequate diet for two ten-week periods in which they ate bacon and egg breakfasts during one period and cereal breakfasts during the other. The periods were reversed so that each subject served as his own control.

The intake of thiamine in the cereal breakfast period averaged .67 mg. per 1000 calories. During the bacon and egg period, the average thiamine intake was .66 mg. per 1000 calories.

The thiamine intake averaged 1968 mcg. for the cereal breakfast and 1986 mcg. for the bacon and egg breakfast. The average daily urinary excretion of thiamine was 191 mcg. during the cereal breakfast period and 187 mcg. during the bacon and egg period. The percentage excretion of thiamine averaged 9.7 for the cereal breakfast and 9.4 for the bacon and egg breakfast period.

Daily niacin intakes averaged 16.26 mg. for the cereal breakfast period and 16.24 mg. for the bacon and egg period. The daily average n'methyl-nicotinamide urinary excretion was 7.04 mg. during the cereal breakfast period and 7.03 mg. during the bacon and egg period. The excretion in both periods was 43 per cent of the intake. The excretion of thiamine and niacin remained the same, regardless of the type of breakfast eaten.

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# Dietary Consultation—A Service for Small Institutions

## VIII. Food Cost Accounting

**Compiled by Grace McMahon[1] for the National Committee of the Community Nutrition Section[2] of The American Dietetic Association on Preparation of a Manual for Use in Dietary Consultation Service to Institutions without Trained Food Service Personnel**

EXCELLENT reports (1–10) are available covering cost control in large food service operations where there is complete departmentalization, and useful literature is also available for "small" institutions (11–18). However, the definition of "small" in this case may mean an operation serving as many as a thousand meals per day. Those institutions in which twenty-five to fifty persons are cared for need basic counsel in setting up a simplified system for controlling the cost of food. The consulting dietitian is aware that this is a special problem for the group larger than the family size, yet too small to have the complex accounting procedures of a large institution.

The object of this discussion is to recognize and consider the problems of the consultant in the area of food cost control and accounting and to provide a critical bibliography consisting of two types of source material: first, selected references that will provide the consultant with new and pertinent material to help her evaluate and meet these problems; and second, references to material to be distributed by the consultant directly to institutions.

In the survey made of the need for and duties of dietary consultants (3), few requests from small institutions for help with food cost accounting were reported. From this, it might be presumed that cost is not a problem. However, a desire for help in cost accounting was no doubt implied in the large number of requests for help with purchasing, which is an important control point in a food service operation since it represents disbursements.

### PURPOSE OF ACCOUNTING AND COST CONTROL

The major function of accounting is to serve managerial needs and to facilitate achievement of managerial objectives. McNamara has stated (10): "The purpose of food cost accounting is to assist the management in supplying meals . . . at the lowest possible cost *consistent with the policy* of the administration as to quality and quantity of these meals. . . . It does not attempt to accomplish results by interfering with the quality of the food." Thus, the consultant should study the institution's policy and the standard of food service the administration wishes to maintain. With this in mind, her recommendations concerning accounting and cost control procedures can be adapted to the institution concerned.

It should always be remembered that accounting is a means to an end, not an end in itself, and the consultant may find that in many small institutions a detailed food cost control system may be considered too time-consuming. However, there are simple basic procedures which will provide financial control of and needed information on the food service. These include: (a) the budget, (b) the menu, (c) purchasing, (d) store room control, (e) standardized recipes and portion control, and (f) records.

### THE BUDGET

Although many institutions still have a hit-or-miss fiscal existence, the practice of budgeting is now

[1] The advice and counsel of the following people is gratefully acknowledged: Mildred Bonnell, Felisa Bracken, Mary Ellen Dambold, Margaret B. Dreisbach, Mary Griffin, Clarice Gullickson, Jane Hartman, Marjorie Heseltine, Edith Holt, Helen Hunscher, Cora Kusner, Rosalind Lifquist, Juanita Cochran Miller, Mary W. Northrop, Helen Phaneuf, Hazel K. Stiebeling, Frances Swenson, E. Neige Todhunter, and members of the Executive Board and staff of the American Dietetic Association.

[2] Members of the Committee were: 1946–48—Margaret Walsh, Chairman, Magdalin K. Espy, Elizabeth Perry, Theresa Powers, Wilma Robinson, and Pearl Rorabaugh; 1948–49—Adelia M. Beeuwkes, Chairman, Magdalin K. Espy, Elizabeth Perry, Mary Agnes Pohl, Wilma Robinson, Pearl Rorabaugh, and Jane Sedgwick.

accepted in the accounting world as the best way to control costs (19). A budget is based on the principle of pre-planning and does not necessarily imply the restricting of expenditures. It may mean only reapportioning, according to the policy of the institution. Naturally, if records of past expenditures are available and if the standard of performance that was maintained is known, it will be much easier to make a budget which is appropriate and specific. Since the budget will be concerned with the overall operation of the institution, the dietary consultant may not have much to do with determining the amounts allowed for the food service department. However, often she will be asked if the amount is large enough to provide an adequate diet for the patients of the institution.

To answer such a question, she will need to calculate in terms of food and food groups the cost of an adequate dietary for the number of patients to be served. Such tables as the one reproduced in the article on menu planning (20, 22) could be appropriately used as a guide in estimating quantities needed for low- and moderate-cost levels. The figures thus obtained could be translated into dollar values at the current price level. Of course, the amounts of foods produced by the institution itself, the effect of rising and/or falling prices, the length of time the budget is to be in effect, and the trend of the business cycle would also need to be considered.

### THE MENU

Once the adequacy of the food department allowance in the overall budget of the institution is established, there remains the problem of budgeting that allowance within the department itself, and this may be part of the employees' duties rather than of the consultant's. Help along this line may be found in *Helping Families Plan Food Budgets* (21) and in the article on menu planning (22).

Actually, the focal point of food cost control is the menu (23, 24). If the budget allowance for the food service department is based on a definite cost level, the menu can be planned using those foods and food groups appropriate for the established standard, and partial control of the cost of food will be achieved automatically.

It may be helpful for the consultant to show the menu planner how to divide the budget. Using the cost-per-meal-per-person method of figuring may help the average non-professional planner. Additional information of value to the planner would be facts on current prices of foods, the portion allowances, and the amounts required to serve the number of persons in that particular institution. Such a procedure would correspond to the method suggested by the Bureau of Human Nutrition and Home Economics (25) for calculating costs of a school lunch.

On the other hand, if the menu planner is a house

TABLE 1

*Worksheet for planning orders for daily perishables*

XYZ INSTITUTION

(insert date)

| MENU | MEATS | | | FRUITS AND VEGETABLES | | | OTHER NEEDS | | | VENDOR | DATE ORDER IS TO BE PLACED |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Amount and specification | Inventory | Order | Amount and specification | Inventory | Order | Amount and specification | Inventory | Order | | |
| | | | | | | | | | | | |

wife who has planned meals for a family, a *weekly* budget might be preferable, for it would draw on her experience. Then, provided the essentials for an adequate diet are met, the desired cost level might be reached by alternating low- and high-cost foods on the menus. If menus are later compared with actual expenditures, which in turn are compared with the budget allowance for the department, the excessive use of expensive foods would be revealed and such practices could be avoided in the future.

### PURCHASING

After the menus have been planned, the next step in cost control (and also in overall operation of the food service department) is purchasing. Employees in a small institution may need not only help with actual purchasing procedures, but also advice regarding forms on which records are kept (46–48). The consultant may feel that they should be encouraged to set aside a time for figuring market orders as a regular routine, as in the case of menu planning.

If she can provide simple forms, it will help the employee to systematize the procedure. A form, as in Table 1, for recording anticipated needs beside the menu may result in more definite work procedures. Since a vendor may deliver but once or twice a week, the date the order should be placed can be written beside his name. Then the orders to be placed on a given day can be combined. The next step is issuing the actual purchase order—the first tangible evidence of a purchasing transaction.

Another form to simplify purchasing control might be developed along the lines of the daily form shown in Table 2, on which costs of purchases can be recorded. Then, by adding the total of each day's costs for a given period—perhaps a week or a month—and dividing by the total number of days involved, the average daily food cost can be obtained. Such an average is desirable since some purchases include more than one day's supply (26). It also makes possible a comparison between actual and budgeted costs. If a further breakdown is needed, a form could be devised for keeping a cumulative record of the costs of each food group. There would be columns for entering each day's total for costs for meats, poultry, fish; eggs; milk; fruits and vegetables; bread products; fats and oils; storeroom staples; and miscellaneous. With this information totalled for a given period, it would be easy to see if the cost of any food group is getting out of line.

Employees may also need to be taught the principles of economic food buying. Before any suggestions can or should be made, the consultant should acquaint herself with purchasing methods currently used, and wherever possible adapt suggestions to existing routines and procedures.

Emphasis on wholesale rather than retail buying may be needed, or investigation of all possible sources of supply in a given area may reveal better markets than are being used. In this, it may be part of the consultant's work to provide information about the various wholesale distributors. Consultants have also pointed out that when it is necessary for some institutions to purchase on a retail level, a discount can be expected because of the quantities ordered.

Advice as to future buying may also be needed. Although an adequate, well-controlled inventory is desirable, the feasibility of purchasing for the future may depend on storage space, as well as other factors, such as working capital of the institution and promised delivery dates. Usually since canned goods are available the year round, it is not necessary to buy large quantities at the beginning of the pack. Overstocking the storeroom is unnecessary unless deliveries are uncertain.

General instructions about buying (27) are avail-

TABLE 2

*Daily record of cost of purchases*

Daily budgeted allowance $ _____ XYZ INSTITUTION

(insert date)

| DAILY FOOD PURCHASED | UNIT COST | QUANTITY OR AMOUNT PURCHASED | TOTAL COST |
|---|---|---|---|
| Pork chops | $ | | $ |
| Potatoes | | | |
| Flour | | | |
| Spinach | | | |
| Milk | | | |
| Butter | | | |
| . | | | |
| . | | | |
| . | | | |
| . | | | |
| . | | | |

able, but the consultant may find that employees need to understand specification writing. Although an academic discussion of figuring specifications and anticipated yields may be confusing to the untrained person, a few basic examples might help to encourage planned buying. In this case, a list of specifications for a few of the most frequently used foods, with notes on the most profitable package sizes might be developed. Purchasing guides for canned fruits and vegetables have been developed by the American Hospital Association (28) and the government (29), and guides for buying canned and fresh vegetables are also found in West and Wood (8) as well as other sources (9, 16, 30). Buyers may need to be introduced to new vegetables, such as broccoli, escarole, or chicory, to encourage them to supply variety in fresh vegetables.

The purchasing of meats will be more easily taught if specifications for immediate requirements are listed. Such lists can be lengthened as additional needs occur; however, taking care of day-to-day requirements is more important than worrying about occasional unusual demands. A listing of the grades of meat can be found in texts, such as West and Wood (8), although the consultant needs to be aware of the recent revisions in government grading (31). The trade associations issue clear descriptions of meat cuts for use in purchasing in quantity. To furnish more explicit directions concerning meat purchasing, the consultant may wish to recommend lists such as those found in *How to Cut Food Costs* (9).

Guides for purchasing poultry and eggs (32), dairy products, fish, frozen foods, staples, breads, cereals, fats, and oils may be needed depending on the location and specific needs of the institution. Market reports from the government will also be a help in planning purchases (32–35).

Requests for tables giving exact amounts of food needed for a given number of servings have been made by many institutions. If the individual serving portion can be stressed, the buyer can be taught to calculate amounts needed for any number. There are definite rules which furnish such information (8, 9, 16, 26, 36, 37). However, some adaptation may be needed to establish correct information, since such rule-of-thumb figures may be based on portion sizes which may not coincide with those used in the particular institution concerned. Buyers should be cautioned in calculating meat to consider shrinkage. Too often, persons figure that a pound of raw meat without bone will yield four 4-oz. servings cooked meat, rather than only three. Also, the total weight of loins or ribs may not be specified, and consequently the size of the serving may not be within the weight and cost desired. For example, buying a 12-lb. to 14-lb. pork loin would cost more per pork chop than an 8-lb. to 10-lb. loin. While the number of servings would be the same, the portion and area of meat of the larger loin would be greater.

One consultant has issued suggestions for purchasing procedures and methods (38) which summarize these points and which can be used as a guide by the untrained employee. Her suggestions are:

(a) Investigate thoroughly all sources of food supply in your area.

(b) Decide on the type and quality best suited for the probable use of each item. Use government grades as a guide. A less expensive grade may be satisfactory.

(c) When buying fresh milk, always buy pasteurized milk.

(d) Consider weight (or size) and quality (or grade) in relation to the price when you buy eggs (32).

(e) Buy fresh fruits and vegetables in season. On delivery, check for blemishes and decayed produce. See that containers hold specified weight or measure.

### RECEIVING PROCEDURES AND STOREROOM CONTROL

Checking and recording of receipts and storing of produce and merchandise follow the placing of orders. The manner in which food is stored is indicative of the appreciation of its monetary value in an institution and how much control is being exerted over food cost. Thus, the receiving and storeroom clerk is a key figure in controlling food costs, for he presides over stocks which represent money. The importance of his position can usually be determined by the total value of the inventory for which he is responsible, and it is important that a capable and reliable person be selected for this position.

Once hired, he may need training both in checking deliveries and also in stock handling and inventory keeping. As the receiver of deliveries, he will inspect merchandise for quality, quantity, weight, and keep records of all receipts for use by management in checking disbursements. If the consultant finds that this has not formerly been done, she may need not only to train the person in his duties along this line, but also to recommend to management the purchase of scales on which produce and other merchandise can be weighed to be sure they meet original specifications.

Storage of receipts is equally important if deterioration on merchandise is to be prevented (39). The physical requirements of a storeroom (proper equipment) have been described (40). The storage facilities should provide space not only for dry and canned goods, but refrigeration for perishables as well. If storage space is adequate, the placement of staples with a corresponding record is facilitated. There are references which outline methods of establishing an orderly storeroom (12).

The storeroom, no matter how small, should be locked, and some responsible person delegated to issue the supplies. Thus the constant trips and loose control of keys so often found in the dietary department can be eliminated.

In many small institutions, the inventory of food supplies is maintained in conjunction with purchase records in the business office. If records of food inventory, purchases, and issues are not maintained, some simple method should be installed; especially should daily issues of food be recorded. This may be merely a listing of food taken daily from the storeroom, from which money value can be figured in the offices. These daily records should agree with the total issues computed from the periodic physical inventory, usually taken at the beginning and end of each month. The inventory records should also contain notations concerning the minimum level of stock to be reached before re-ordering.

Storeroom records may differ in various institutions—from a daily perpetual inventory to a physical monthly inventory. A cross check, including a periodic physical inventory by someone other than the stockroom person and someone who knows the food stock well enough to be able to take an adequate inventory may be an important measure of control.

### RECIPE AND PORTION CONTROL

Although the management in a small institution may feel that records of purchases and issues of food are all the evidence needed for food cost control, such records would actually be inadequate for complete control of the food used. Leaks must also be plugged in the actual preparation of food. Effectiveness along this line will depend, in any department, on the ability of the personnel and their understanding of the importance of controlling preparation, cooking, and serving procedures. Waste has been discussed in a previous article (41), as has food preparation. However, certain aspects overlap with this discussion and deserve recognition here.

To execute a complete program of food cost control, the use of standardized recipes which give accurate portion control is necessary. Too much emphasis cannot be put on portion control, for when employees are conscious of the number of portions expected from a given amount of food, they are much more careful of their methods.

Yield must be also considered in relation to purchasing and cost, as well as in actual food preparation and serving. Recipes which include the number of portions as well as total amounts of food used are basic. This phase of food control is not simple when there is little or no direct supervision of food production and the consultant must rely on the employees to carry out instructions. However, each institution should have its own portion standards, and if these portions are posted, the personnel will have a reliable reference to use in the absence of a supervisor. References and graphic helps which give other suggestions along this line are available (42–44).

The determination of standard portions requires the adoption of standard rules for cutting cakes, pies, and other food, using the size of pans already on hand. It may also involve the recommendation of the purchase of standard sized scoops, measures, ladles, and pans.

### RECORDS

The records necessary for providing management with information on basic transactions could be simply summarized as follows:

(a) Records of purchases and receipts. An indication of a method to be used in recording purchases (and their receipt) has been given.

(b) Record of food consumed in a given period. This involves taking an inventory at the beginning and end of a stated period. This amount of food

TABLE 3

*Meal census form*

XYZ INSTITUTION

Month_____, 19__

| DAY | PATIENTS | | | | PERSONNEL | | | | TOTAL MEALS SERVED |
|---|---|---|---|---|---|---|---|---|---|
| | Breakfast | Dinner | Supper | Total | Breakfast | Dinner | Supper | Total | |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| . | | | | | | | | | |
| . | | | | | | | | | |
| . | | | | | | | | | |
| 30 | | | | | | | | | |
| 31 | | | | | | | | | |
| Total..... | | | | | | | | | |

plus perishable food not issued through the storeroom would compose the amount of food consumed. Consultants could refer to sources of records for inventory forms that pertain to the institution (45).

(c) An accurate meal census. A form, such as the one indicated (Table 3), would provide a record of the number served at each meal. A statement of policy referring to the manner in which nourishments, coffee, and formulas are to be tabulated is necessary for an accurate, consistent count.

(d) Form for the calculation of the food cost per person. This would involve dividing the food consumed as calculated in (b), by the number of persons fed as calculated in (c).

A method of simple record keeping for a small restaurant (45) might give the consultant an idea of the essential data necessary for records. Further information about labor costs and records may be needed in special instances (9).

SUMMARY

This discussion has presented some simple procedures in accounting and food cost control which could be used to give management an accurate record of expenditures and methods of determining the efficiency of these expenditures. It is important that any device for control be meaningful and within the capacity of the organization to administer.

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## Food Service in Small Institutions in New York City

Thirteen institutions in metropolitan New York were surveyed by the Department of Institution Management, Cornell University. They included children's homes and homes for the aged having a census of from 25 to 300 people. Catholic, Hebrew, Protestant, and nonsectarian groups were represented. The study was undertaken to gain a better understanding of the needs and problems of small institutions through observing their kitchen facilities and by talking with the persons in charge.

Two of the homes had a person responsible for only the food service. More often the superintendent or nurse assumed this responsibility in addition to his or her many other duties. Much responsibility was left to the cooks. In all instances the superintendent and/or bookkeeper did the purchasing of food, which was done either over the telephone or from salesmen who called at the office. Some groups were affiliated with a central purchasing service, through which they obtained most of their canned goods. Institutional size cans and packages of food were generally used.

A trip through the storerooms and a look into the refrigerators made it clear that money is not always wisely spent. In most of the institutions, the shelves were filled with fancy grades of canned fruits and vegetables. Vegetables one would not have expetced to see in January in institutions operating on limited budgets, such as fresh tomatoes, green peppers, and cucumbers, were found.

Menus in general were monotonous and stereotyped. Canned fruits and vegetables were used almost without exception. Salads were seldom served. The brightest spot in the menus, from the nutritional standpoint, was the consistent use of citrus fruit juice for breakfast.

Space for kitchen, dining room, and storage was generally adequate. Several places had stainless steel equipment. It had not always been selected to fit the needs of the situation, but the common viewpoint seemed to be that since the equipment was stainless steel, the kitchen was a good one. The fact that some of the sinks were designed for washing very large pots and pans, and that the dishwashers were practically standing on their heads to wash dishes in these sinks apparently passed unnoticed. In some places, expensive pieces of institutional equipment which had been bought weren't installed or being used because there was no need for them. Nevertheless, the lack of equipment did not appear to be a major problem.

There appeared to be little knowledge of food costs, except that they are high. Only two institutions kept any current records of food costs and knew how much they were spending per meal for food. Others economized wherever they felt that they could and just hoped that they would be able to pay their food bills.

One superintendent said that it was always easier to get money for concrete things, such as a television set, range, electric mixer, or furnishings for a room, than it was to get money for operating expenses. Finances were the main problem of every director visited. Because the high cost of food is a major problem, these directors were exceptionally interested in information about food purchasing and preparation.—*Dorothy M. Proud, Extension Specialist, New York State College of Home Economics, Cornell University, Ithaca.*

# Editorial

## ARMY OPPORTUNITIES FOR DIETITIANS

This year, with war clouds darkening many horizons, all eyes are turned toward military expansion and to the varied and increasing needs of our men in the Armed Forces. Among these, the care and nutrition of men wounded in battle is of primary importance. Hospital dietitians now assigned to the Army's Women's Medical Specialist Corps, therefore, are today assuming new and vital responsibilities in the recovery and rehabilitation of the nation's heroes.

Army dietitians, all commissioned officers with the full pay and benefits of their rank, usually begin their tour of military duty in one of the larger hospitals of the Army Medical Service. There are ten of these in the United States—and several installations of comparable size in Europe and in Japan. In the U. S., a dietitian may serve at Madigan Army Hospital, close to the snowcapped peak of Mount Rainier in Washington; at Letterman, located in the historic Presidio at San Francisco, overlooking Golden Gate Bridge, the Marin Hills, and in the distance the blue Pacific; at Brooke Army Hospital in San Antonio, Texas, with its Alamo and combined western-ranch and Mexican atmosphere. There are also Beaumont in El Paso, Texas; Fitzsimons at Denver; Percy Jones in Detroit; Valley Forge near Philadelphia; Army-Navy in Hot Springs, Arkansas; Murphy near Boston; and, of course, Walter Reed Army Hospital in the nation's capitol.

All these hospitals are modern and well equipped, offering not only excellent food service facilities but also the opportunity for gracious living in comfortable and attractive quarters and the chance to become part of the active social life of each Army community.

Army dietitians gain experience in administration, as well as in therapeutic work on the staff of these large hospitals. They have the further advantage of rotating their assignments through all phases of the food service so that later they may be qualified to take over any—or all—of the duties for which the Army dietitian is responsible. This experience is particularly valuable to those who may ultimately be selected to manage the food service of one of the Army's smaller facilities, formerly called "Station Hospitals," of which there are fifty-three in the United States alone.

Throughout the Medical Service, Army dietitians with an interest in teaching will find opportunity to employ their skills in this branch of their specialty. Many of the Army's training centers are rapidly expanding, and large, new centers are also being opened; in all of them Army hospitals provide health safeguards for the new recruits and for the permanent personnel of the Post and their families. Here is a wide field in which the Army dietitian may function as teacher. Her students may be hospital patients, learning dietary habits which will aid their rehabilitation when hospitalization ends. They may be young Army mothers with personal nutrition needs or with infant feeding problems. Or, they may be the enlisted or civilian employees of the hospital food service who require instruction in food handling, cooking, or the preparation of foods for special diets. Another interesting assignment for the Army dietitian is the instruction of enlisted personnel enrolled in the Army's Medical Technician Procedures, Advanced Course. These men and women are learning practical nursing and, after thirteen months of lecture and supervised practical experience in the hospital, will qualify for licensure in accordance with requirements specified by the National Association of Practical Nurse Education. All cookery and dietary instruction included in the curriculum is provided by Army dietitians.

There is also opportunity for research in foods and nutrition, although this is a more limited field than the other career fields open to dietitians in the Army Medical Service. Army dietitians are currently participating in research at the Metabolic Clinic at Walter Reed Hospital and at the Food and Container Institute in Chicago, to name just two examples.

But the most rewarding aspect of the Army dietitian's career is her opportunity to serve the men who are serving in the nation's defense—whether they be combat casualties from Korea or new recruits in training. Currently, the Army has immediate openings for 247 qualified dietitians. Those who are free to volunteer for active duty now, will never have cause to regret it.

## OBJECTIVES AND EXPERIENCES OF AN ADMINISTRATIVE INTERNSHIP[1]

For the past several years, the directors of approved dietetic internships have engaged in planning a curriculum based on a detailed study of the objectives of an internship in all of the major areas of therapeutic and administrative dietetics. This clarifi-

[1] Presented at the 33rd Annual Meeting of The American Dietetic Association in Washington, on October 18, 1950.

cation of objectives will be of considerable value to the directors in providing uniform experiences in internships approved by the Association. I would like to discuss four comprehensive objectives of an internship which I consider important and some of the desirable personal characteristics of an intern entering this training.

For many years we have glibly repeated the cliché —"this is a woman's field; a dietitian does not have to compete with men." This is no longer true of the administrative dietitian, with perhaps the exception of the hospital administrative dietitian. Increasing numbers of young men are entering the field, some with professional training and some following formal education for the hotel and restaurant industries. At the same time graduates of administrative internships are showing increasing interest in obtaining positions in hotels, restaurants, clubs, industrial cafeterias, and transportation companies, where men have long been employed in positions of varying responsibility in the food service.

### COST CONTROL TRAINING

It seems to me that one of the objectives of an administrative internship must be to prepare the dietitian to meet competition through adequate training as a capable business woman. Through "learning by doing," the intern will come to realize the importance of sound record keeping, not as a detached set of records but, as they reflect the financial status of a functioning unit. She learns that the success of the operation depends on sound purchasing methods, careful menu planning, scientific food production, attractive food service with portion control, and up-to-date methods of personnel management.

Through actual practice in planning menus for the particular situation in which she is training, she learns the importance of fitting these menus to the people to be served, the equipment, and personnel available. As she plans the menu, tests sample products, and assists in purchasing, she learns to keep an eye on the budget or the food cost percentage to conform to the policy of the organization and to make a profit where that is expected.

In the test kitchen, she develops recipes and figures the cost of the standardized portion of new items. Or, she may make adjustments in an old recipe to improve the product or to reduce the cost.

The intern learns to schedule the work and hours of the employees to the best advantage and to prepare charts showing the hours, duties, and production needs to check the effectiveness of the scheduling. All of these experiences will help to develop an appreciation of the importance of each in controlling costs. She learns to analyze and interpret records and methods, and best of all, to think. To obtain the necessary technical background, the student must absorb certain information, but as an intern she must learn to judge the effectiveness of various techniques and to make decisions.

### SUPERVISORY TRAINING

Another, and one of the greatest advantages, of the internship is that it provides an opportunity for the intern to know and to understand all kinds of people. We have found it helpful to include a series of classes on job instruction training, job relations training, and job methods training early in the course. In this way, the intern develops a sound foundation for good human relations. Then, through guidance and example, she learns to understand the employees and develops supervisory skill in her contacts with them.

She learns how to make a job breakdown and how to use it in teaching a new employee. Because as a supervisor the dietitian spends much of her time in teaching, the intern must develop techniques which will be effective. She must learn to express herself clearly and concisely. Her future success will be influenced by the philosophy and skill she develops in her personal relationships.

### NUTRITION EDUCATION

Since the foundation of her profession is the science of nutrition, we must not neglect this phase of the administrative intern's training. Although her success in a commercial position will largely depend on her ability to make a profit, to be worthy of her profession she must remember that one of its objectives is "to improve the nutritional status of human beings."

In planning the menus and in supervising the food preparation, sanitation, and service to conform to the newer knowledge of nutrition, the intern learns to apply the principles of normal nutrition to food administration. She can use her knowledge of food merchandising to encourage her clientele to select the foods that are nutritionally best.

This is a good time for the intern to evaluate her own food habits and to set an example for all who observe her choices at meal times. As is so aptly stated in the booklet, *Dietetics as a Profession*, "No dietitian can afford to be other than a model of health, weight, and intelligence, because she serves as an example of what the proper diet can accomplish."

Perhaps we should place more emphasis on this point. Interns have a tendency to gain weight. We have found it effective to tell each intern her ideal weight at the beginning of the course. Each week they record their weight in the office of the internship director. Food histories are evaluated for those who have difficulty in attaining the ideal weight.

The intern must also be taught that the science of nutrition is ever changing and that she must read and study to keep up-to-date. During the internship, she has an opportunity to become familiar with the

many publications in the field and, as a result of seminar discussions, can decide which will be of most value to her as a dietitian.

### EDUCATION IN PROFESSIONAL RESPONSIBILITY

Simply applying the principles of good nutrition to all phases of food administration will not necessarily endow the intern with the characteristics of a professional person. By example and by individual counselling, she must come to an appreciation of her profession and what she as an individual can do to be a worthy member of it. She must develop a social viewpoint and participate in professional and community affairs. The motto of the Association, "to benefit as many as possible," should also be her aim.

By becoming a junior member of the Association during her internship and attending meetings of dietetic associations whenever possible, the intern becomes acquainted with the work of her professional organization. Field trips to community agencies give her insight into the work of others in her profession and in allied fields at the community level. This will stimulate her interest in giving of her knowledge and assistance as a good citizen in her community.

Thus, the major objectives of an administrative internship are to develop: (a) a good business woman through "learning by doing" in a functioning organization; (b) a good supervisor who understands and practices good human relationships while teaching and supervising her staff and employees; (c) a dietitian who applies her knowledge of the science of nutrition to the art of feeding people, and (d) a professional person who willingly contributes to the work of her profession and is a good citizen.

### PERSONAL QUALIFICATIONS

Those of you who are heads of home economics departments or staff members who assist in guidance or counselling are no doubt interested in the qualities considered desirable in the student who should be encouraged to apply for an administrative internship.

First, she must have good health. The administrative dietitian often spends many hours standing and walking. Without good health, she will not have the keen mind and even disposition so necessary to any supervisor.

Since the administrative dietitian must understand and get along with all types of people, she will need to be emotionally stable. The student who demonstrates tact, a sense of humor, and the ability to gain the confidence and cooperation of others has important supervisory qualities.

The student who has shown leadership qualities in class work and in extra curricular activities has potentialities for an administrative position and will usually exhibit these same characteristics as a supervisor. This is not the field for an introvert.

It goes without saying that she must have a real interest in dietetics as a profession. With desirable personal characteristics and the practical experience under guidance during the internship, she should become a worthy member of her profession, a competent and successful business woman, and an asset to her community.—*Wintress Dalbey Murray, Nutrition Director, Eastman Kodak Company, Rochester, New York.*

### A.D.A. STAFF CHANGES

On February 26, Clara Zempel joined the headquarters staff of The American Dietetic Association in the capacity of Professional Activities Director. Miss Zempel is a graduate of the University of Illinois and took her internship at Indiana University Medical Center, Indianapolis. Following completion of the internship, she remained on the staff at the Medical Center as the dietitian in charge in the Pediatrics Department. She has been active in the work of the Indiana Dietetic Association, having served as Public Relations Chairman in 1949. In this capacity she was in charge of the dietetic exhibits at the 1st International Dairy Exposition and at the Indiana State Fair, both held in Indianapolis, as well as the Career Day planned to acquaint students with the opportunities in dietetics.

Miss Zempel succeeds Margaret L. Ross, the Association's first Professional Activities Director, who has accepted an appointment as research assistant in the Department of Nutrition, Teachers College, Columbia University. During her affiliation with the Association, Miss Ross has helped many of the state dietetic associations in developing their programs of work and has served as the national Association's representative at a number of state meetings. She also played an important part in planning and arranging the well-coordinated professional program for the Association's convention in Washington last year, and has worked closely with the Library Committee in the first phases of organizing the Lulu G. Graves Memorial Library.

### Calling Camera Fans

Photography hobbyists ("camerist" is the new name) are being given incentive to dust off the Leica, the Kodak, the Speed Graphic, the Retina, or the Exakta and focus their lenses upon dietitians and nutritionists in their various working situations. Pictures that tell a story, pictures that are clean cut and eye-catching should be sent to the Photographic Contest Editor, American Dietetic Association (see page 330).

# Current Comment

## REPORT OF THE MIDCENTURY WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH

ERCEL S. EPPRIGHT, PH.D.

*Head, Department of Foods and Nutrition, Iowa State College, Ames*[1]

Five thousand delegates from the United States and thirty-seven foreign countries met for four days in Washington in December for the Midcentury White House Conference on Children and Youth. The purpose of the Conference was to consider the forces which bear on the spiritual, mental, emotional, and social well-being of children. People of all races, creeds, and colors were represented. It was a conference *with* youth as well as *for* youth; five hundred of the representatives were young people. For two years prior to the meeting, local groups had considered the theme of the Conference, and facts bearing on the problems had been collected.

At the Conference, thirty-five work groups were formed to study broad areas of child welfare, and these were charged with developing recommendations for follow-up, a phase of the program as important as the Conference itself. Keynote speakers, panel discussions, films, plays, and exhibits provided the background for discussion by the work groups. After concentrated work during three half-days, recommendations were submitted to the general conference committee who compiled them for final action by the delegates. On the last day, the delegates had an opportunity to vote individually on each of the recommendations. Each person had a voice in the adoption of the recommendations, and each felt his vote was important.

The Conference itself demonstrated the philosophy behind this feeling in many ways. It recognized the dignity and worth of the individual. It allowed no discrimination. It involved youth in every phase of the program and heard youth in the final recommendations. It was so planned that each problem brought to a focus the thinking of many different fields. For example, the groups concerned with health services contained physicians, dentists, nurses, social welfare workers, ministers, educators, physiotherapists, and nutritionists. This inter-disciplinary approach was one of the unique characteristics of the Conference.

The findings and recommendations, together with other valuable materials, will be available. The following report merely gives the highlights and some of the implications for The American Dietetic Association.

### HIGHLIGHTS FROM THE GENERAL SESSIONS

The keynote speakers stimulated thought and provoked action. A glance at the titles of the main speeches suggests the scope of the Conference: "Spiritual Foundations for Our Work with Children and Youth"; "The Social and Economic Factors in Personality Development"; "What We Know Today about the Development of Healthy Personality in Children and Youth"; "The Impact of Culture on Personality Development in the United States Today"; "Children in the World Today"; and "Putting Our Present Knowledge to Work."

A brief summary of some of the statements that influenced the thinking of the Conference workers is given below.

"The child is the hope of the world," said the Reverend George A. Buttrick, Pastor, Madison Avenue Presbyterian Church, New York City, "or would be, if he didn't have to live with grown-ups. How many peace treaties are made for children? How many advertisements are written for children? Banks are certainly not made for children. Jesus taught that the child is the focus of the world."

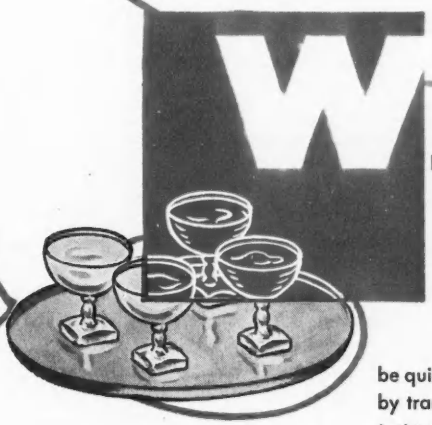
Dr. Buttrick warned that we live in a mechanistic, homeless, secular civilization. He said that there are no perfect parents even among the psychologists. In many homes not openly broken, a cold war exists. Too many homes are simply stopping off places to and from the garage, and success is a nasty mixture of cash and gadgets. He said: "Faith is our life thrust into a hidden future. Reason is a puny little child that strong faith carries on its shoulders. Personality cannot move an inch without personal faith. We can dimly see the way, but we shall never find it except by an act of faith."

### EMOTIONAL NEED OF CHILDREN

"American parents," according to Dr. Benjamin Spock, Co-Director Rochester Child Health Institute, Rochester, Minnesota, "might well conclude that it is hopeless to try to bring up children right. The one vital thing is that the child have a pair of good parents who love him dearly. With this he can get along without many things. It is a most fascinating fact of infancy that at two months the baby can smile delightedly when the mother greets him. The

[1] Official representative of The American Dietetic Association at the Midcentury White House Conference

# GIVING MILK THE GREEN LIGHT!

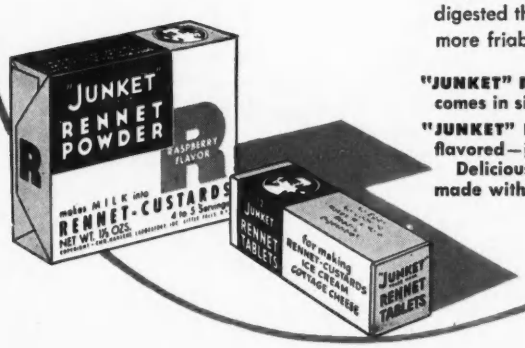


WHEN MILK IS A VITAL PART of the daily regimen, such as in infancy, childhood, pregnancy, and for gastro-intestinal, postoperative and geriatric conditions—a serious aggravation of the dietary problem may occur for those patients who (either for physiologic or psychologic reasons) are unable to ingest this essential nutrient.

In such cases, the *red light* of milk refusal may be quickly changed to the *green light* of eager acceptance—by transforming the liquid milk into deliciously flavored, tasty rennet desserts, through the medium of rennet powder or household rennet tablets.

Young and old alike relish these temptingly smooth custard-like desserts which incorporate the uncooked milk — with all nutritional factors unchanged — into a variety of delicious, colorful rennet desserts. They're so simple to prepare—and are more easily digested than milk itself, because of the softer, more friable curds formed in the stomach.

*"JUNKET" is the trade-mark of Chr. Hansen's Laboratory, Inc., for its rennet and other food products, and is registered in the United States and Canada.*




**"JUNKET" RENNET POWDER** — already sweetened — comes in six popular flavors;

**"JUNKET" RENNET TABLETS** are not sweetened or flavored—just add sugar and flavor to taste.

Delicious, highly acceptable rennet desserts may be made with either.

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baby is clearly intended to love and be loved—love is as vital to the baby as calories. Everything that makes babies tense is unfortunate."

"We who know something about children's needs do not speak up convincingly, and children cannot speak for their rights. Children are eager to learn if work is geared to their interests. There is great need to make use of the wisdom we now have. . . .

"Science may have robbed parents of their confidence in how to take care of children. Why are married mothers going to work in increasing numbers? It may be because of tensions and uncertainty about their role as housekeeper and in child care. Most of our schools focus too largely on the world outside. A girl gets the idea that the only worthwhile contributions are in science and business, for example.

"The failure of schools to sensitize men to their roles as human beings handicaps men as lawyers, doctors, etc.

"Primitive mothers who sit around in groups and weave while their children play around them provide more and earlier help for emotionally neglected children. Why do so many parents fail to enjoy their children? What can education do to keep alive the delight of parents in children?" Dr. Spock concluded with this statement, "There is no more profitable and soul-satisfying job than having and caring for children."

### INTEGRATION OF KNOWLEDGE

Leonard W. Mayo, Director, Association for the Aid of Crippled Children, speaking on the subject of putting our knowledge to work, said: "Knowledge is defined as a clear perception of the truth, but no knowledge is our own until it has become an intimate part of us." For the better integration of knowledge with its application, Mr. Mayo listed these points which we must work for:

(a) Scientific attitude, which he described as a passion for comprehension.

(b) Better synthesis of available knowledge. (He said that in few colleges and universities does research cross departmental lines, but that there is no baby who does not cross departmental lines.)

(c) Recognition that there is an art of application.

(d) Channels through which to disseminate knowledge. (We must make use of these.)

(e) Intelligent teamwork at the point of production. (The combined ignorance of college professors is colossal. *Probably as much might be said of their combined strength.*)

(f) Team work at the point of application.

"No one can be a scientist unless he is free; no one can apply scientific knowledge unless he is emotionally free. The way we feel toward people determines how we try to apply our knowledge." Humility can well be a common bond among those who are trying to apply knowledge. Professional education and tested competence are needed for effective application.

### WORLD CONDITIONS TODAY

Speaking of children in the world today, the Honorable Carlos F. Romulo, Secretary for Foreign Affairs, The Republic of the Philippines, said: "Our world is a harsh place for children to be born in. It is a dangerous place for children to live in. A third war looms darkly ahead." He contrasted the present outlook with that at the first White House Conference held on January 25, 1909, when the future was bright and the hope was great that the serious evils which threaten child life could be overcome.

Secretary Romulo felt that the hope of the future is in the United Nations. He said our memories are too short. We forget that the U. N. has already helped to avert many international disasters: in 1946, Iran; in 1947, Greece and Palestine, where through the aid of the U. N. a new nation was born; in 1948, Berlin; in 1948, Indonesia. In the present crisis, the United Nations has reached one of its "lowest points," but Romulo expressed the hope that the united strength of fifty or more nations against six would halt the aggressor and that another war can be averted.

Reverend Buttrick earlier stressed that we must watch our use of the word "appeasement." He said those who think that any alternative to war is appeasement are wrong.

### MOBILIZATION AND YOUTH

Mobilization was recognized as one of the large current problems affecting youth and their families. Dr. William C. Menninger, The Menninger Clinic, Topeka, Kansas, directed the thinking on this subject. He stated that failure of adults is the cause of our problems today. It is bad that we live in a world of hate. One reason that there is so much hate in the world is that we are so immature.

We had a united front for a few weeks after Pearl Harbor. (Romulo said we should view December 7 not as a day of disaster, but as the day we decided to fight to win.) But this united front, according to Dr. Menninger, didn't last.

Mobilization means throwing away our individualism, the thing we cherish. "Our attitudes toward the draft are very bad," said Dr. Menninger. The implications of rejection are bad. Then, too, the first question of every business man who is looking over the college graduate is: What is your draft status?

Youth in military situations need much guidance. A survey showed that 40 per cent had never lived away from their parents; 7 to 10 per cent had never been away from home; and 15 per cent had not been away for more than a week. We must help youth to have the attitude which we need for military strength. Parental support of youth is important. Those of us with homes have much to do with the

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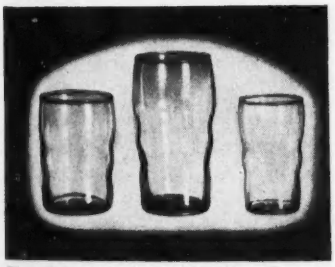

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**All Libbey Heat-Treated** tumblers have this special "H-T" marking—your assurance of 3-5 times longer-lasting glassware.

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Libbey Heat-Treated tumblers meet all these specifications. At *no sacrifice* in strength and durability, too . . . because they're specially processed to take the knocks and stand up 3-5 times longer than ordinary tumblers under most conditions.

For added safety, every Libbey glass has a chip-resistant rim . . . at the spot where most glassware chips first! This feature means added economy through reduced breakage, smaller needed inventory and fewer glassware replacements. And every Libbey glass has this famous guarantee: "*A new glass if the rim of a Libbey 'Safedge' glass ever chips!*"

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security youth feels in going to war. The impact of war on youth is dismal and gruesome. We must think of our strength and then count on youth.

Probably everyone should help, not just a limited number of young men and women. A plan which would involve us all would give security. If we would all forego personal interest for national and international strength, we would add security.

### A HEALTHY PERSONALITY

At the final session the Honorable Oscar R. Ewing, Federal Security Administrator, reminded us that the Conference represented the thinking of 100,000 people who had been working for two years. Into the Conference itself had gone 160,000 priceless man-hours of the best and most creative thinking in the world about children. *He redefined a healthy personality as one who is free to work somewhere near his top mental capacity.* He added that in such a person fear is a healthy danger rather than a life-long nightmare.

### CONFERENCE RECOMMENDATIONS

The recommendations of the Conference were grouped in the following five topics.

(a) Furthering healthy personality in children and youth.

(b) Furthering healthy personality through the family, church, the school, and other social institutions.

(c) Making more positive the influence of religious, social, and economic forces on personality development.

(d) Furthering the healthy personality development of children in special situations.

(e) Mobilizing citizens for the improvement of conditions affecting the personality development of children and youth.

### IMPLICATIONS FOR DIETITIANS

The nutritionist or dietitian must seek her place in the team of workers concerned with the health and well-being of the child. Nutrition was recognized as one of many disciplines which has something to contribute to the total personality of the child. The Conference itself was a demonstration of the advantages gained by crossing departmental lines. The skills and knowledge of doctors, nurses, educators, religious leaders, social workers, lawyers, and numerous others must be brought to bear on the problems of youth.

The fact that nutrition was not represented in the panel of health leaders for the section meeting on health indicates the need to interpret more convincingly our contribution to the healthy personality of the child. One reason for our failure to do this may be our lack of appreciation both of our contribution and of the forces which enter into the child's total development. Physicians are inclined to view nutrition merely as "another health service." How can the dietetic profession improve its contribution to the development of children and interpret it to others?

The idea of teamwork is written into the objectives of the constitution of The American Dietetic Association. A stated purpose is to *foster cooperation between members and workers in allied fields.* Perhaps we should go a step farther and ask ourselves: Cooperation for what purpose? The Midcentury White House Conference has pointed the way, or set the pattern, for cooperation in the most vital of all problems, that of strengthening our youth.

Members of the Association are urged to avail themselves of the Conference materials and to make their own interpretations. As a participant in the Conference, the following seemed to me to be areas in which direct implications were made for members of the dietetic profession.

#### *School Lunches*

The only recommendation from the Conference bearing directly on nutrition referred to the school lunch. It was as follows:

> That school lunches be provided and that children unable to pay for their lunches be furnished them free, without being differentiated from the children who pay.

The school lunch seems to be the opening wedge for making people aware of what can be accomplished by improved nutrition. The future of applied nutrition depends to no small degree on the success of this program. Some reservations about the value of the school lunch were apparent in the attitudes expressed by some of the doctors. Judgments are possibly formed from isolated examples of poor programs. How can the dietetic profession help to improve standards in the school lunch rooms? Certainly we have a challenge and a responsibility in this recommendation.

#### *Community Health Services*

> Prompt action should be taken at the national level to provide funds to supplement those of states and localities, and to stimulate the early development of adequate *local health service throughout the country*, such action being particularly needed because of the physical and mental effects of mobilization and war on the mothers, children, and youth.

The protection of the health of the child is fundamental to the development of a healthy personality. Therefore, community health centers were viewed as important to the focus of the Conference. Nutritionists were recognized as essential in the team of workers constituting a minimum staff.

In schools and colleges, the preparation of personnel for this type of work is not well developed. Young people need more encouragement to select this, as well as other types on health service, for their careers.

# Easy, low-cost way to add IRON and THIAMINE to the diets you plan

The patient most in need of extra iron, extra thiamine, frequently proves a problem. For so often lowered digestive capacity eliminates from the diet many food sources of these nutritional essentials.

That's why readily digestible Hot Ralston Cereal may have a place in the diets you plan. It furnishes generous amounts of iron and thiamine, at a cost of about 1¢ per serving.

A single 1-ounce serving of Hot Ralston supplies the following percentages of the minimum daily requirement—

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| IRON | 113% | 84.9% | 84.9% |
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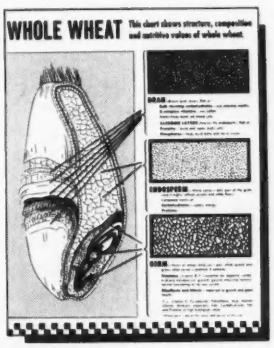
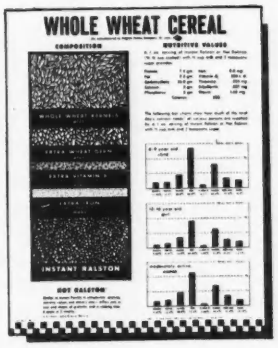
Plus 3.5 Gm. PROTEIN

## NEW TEACHING AID WITH REAL WHEAT!




Novel, instructive chart contains, on one side, *actual samples* of the parts of the wheat kernel — on the other side, a cereal and its ingredients. Gives basic nutritional information about wheat. Demonstrates, visually, the contributions of whole wheat to the diet. Stimulates the interest of both professional and lay classes.

MAIL COUPON FOR **FREE** CHART

Cooks in 5 minutes

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A vigorous vocational guidance program was advised.

*Minimum Standards for Child-Caring Institutions*

> That appropriate public bodies set minimum standards for agencies and institutions providing foster care for children, whether foster day-care or full-time care, and provide for the authorization or licensing and supervision as to maintenance of standards.

Improving the nutrition standards in child-caring institutions is another challenge to the profession. Minimum standards should include recommendations pertaining to nutrition. Members of the Association should be alert to the implementation of these recommendations. What means can we take to further this goal? This recommendation suggests projects for state and local groups.

*"Personalizing" Hospital Service*

Physicians and hospital administrators expressed much interest in the problem of reducing emotional tensions accompanying hospitalization. Various devices for making hospitalization a less traumatic experience for the child were discussed.

Recognition of this problem by the medical staff offers another opportunity for the dietitian. Friendly, pleasant meals can surely help any patient to make a happier adjustment to the hospital situation. Is this phase of dietetic service sufficiently stressed? With the additional emphasis on the psychologic aspects of treatment, the dietitian has a chance to increase the scope of her service.

*Professional Preparation*

The following are important considerations for those concerned with training dietitians and nutrition workers capable of contributing to the total welfare of children and youth:

(a) Steps should be taken at national, state, and local levels to improve the facilities and *increase the output of professional schools* preparing persons for services to children.

(b) Professional workers should be trained in such a way that they will have an *understanding of and respect for other professional skills and contributors* in order that they may work together. This objective should be supplemented with actual field work.

(c) At all levels of undergraduate education, students should receive broad preparation in the *knowledge of human growth and behavior*.

(d) *Interviewing techniques* were stressed as an important tool for health workers. How adequate is our training in this area?

(e) *Fact-finding* should be used as a part of the total educational process. Again, how adequate is our training in the process of fact-finding and the evaluation of such data? There are many places where the dietitian or the nutritionist needs to do a "fact-finding" job if she wishes to plan a vitalized program.

(f) Renewed stress on *nutrition in relation to income* was indicated by the emphasis on the interplay of socio-economic factors and personality development. The imminence of economic stress points to the need of more consideration of nutrition in relation to income and the economic aspects of food.

(g) Professional training should focus attention on the *human side of the subject of dietetics* as well as the scientific.

According to Mr. Mayo, the "art of application" involves the emotions. How we feel about what we are doing is important to our success. Through dietetic service much more can be conveyed than the adequate meal. Is that concept a part of the philosophy of our job?

(h) Higher education in foods and nutrition must recognize its *responsibilities to the homemaker* as well as to the professional worker. In the last analysis, it is probably through the home that nutrition can make its best contribution to the healthy personality of children. A direct relationship exists between the area of foods and nutrition and the development of the healthy personality of the child. The nutrition of the child determines his mental and emotional make-up as certainly as his physical well-being. Tensions in the home are the source of emotional upsets, and those tensions which continuously persist can be the source of personality difficulties. Does our teaching in foods and nutrition help to reduce or augment tensions in those who later apply it in their homes?

Planning meals to reduce economic stress, gearing them to the busy schedules of all members of the family, keeping the mealtime happy, and maintaining high but flexible standards may be as important as learning the names of the nutrients.

*Research*

Much research is needed to fill the gaps in our knowledge concerning the forces which determine a healthy personality. Inter-disciplinary research, or research which crosses departmental lines, was recognized as important to the understanding of the total child. Longitudinal research which will provide a continuing understanding of infants, children, and youth as a sound basis for practice was also stressed.

Application of research was viewed as important to the stimulation of research. Mr. Mayo said, "If we do not better apply research, it will dry up at its source."

*Evaluation*

It was recommended that an inquiring attitude be maintained toward all services, with appropriate provision at all levels for continuous scientific study of needs, objectives, alternative methods, and effectiveness of programs.

# 2 home economics lessons from 1 classroom project!

## LESSON #1

**How to make Creamier and More Nourishing**

### CREAM OF POTATO SOUP

**Serves 4**

- 2 cups peeled and diced potatoes
- 1 medium onion, minced
- ½ cup diced celery
- 2 teaspoons salt
- ¼ teaspoon pepper
- ⅔ cup (1 small can) Carnation Milk, undiluted
- 1 tablespoon minced parsley

Put potatoes, onions and celery in tightly covered pan containing 2 cups boiling water. Cook until vegetables are tender (about 15 minutes). Do not drain vegetables, but partially mash potatoes in vegetable water. Add seasonings and Carnation Milk and heat to serving temperature, stirring frequently. Garnish bowls of soup with minced parsley.

## LESSON #2 HOW CARNATION CUTS BOTH YOUR CREAM AND MILK BILL!

Use the recipe above to teach your students a cooking secret that will make *any* creamed soup taste better. Carnation Milk mixed with the broth in which the vegetables, chicken or meat is cooked, gives soup flavor and nourishing "body" no ordinary bottled milk can match.

Only heavy cream can match the rich, creamy consistency and smoothness you get with Carnation—yet Carnation "creams" soups for less than the cost of regular milk!

So tell your class to use Carnation to cut *both* their CREAM and MILK costs. No special recipes are needed. It's simple as A-B-C:

**A—FOR CREAM RECIPES**... including "creaming" fruits and cereals... use Carnation Milk, *undiluted*. Like good rich cream, Carnation is easy to *whip*. Millions of people like Carnation better than cream in coffee, yet it costs less than half as much.

**B—FOR ALL MILK PURPOSES**... use Carnation mixed with an equal amount of water. Diluted 50-50, Carnation is still richer than *any* state standard for bottled milk. And in most states, Carnation costs only about two-thirds as much as bottled Grade A milk!

**C—THE AVERAGE FAMILY** can save up to one-third by using Carnation Evaporated Milk instead of expensive cream and bottled milk! (Don't forget to use Carnation in your classroom projects—to stretch your home economics department budget!)

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Nothing but water is taken out of Carnation Milk—all the good sweet cream is left in!
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VITAMIN D INCREASED HOMOGENIZED

"from Contented Cows"

# Book Reviews

**Food for Little People.** By Hazel Kepler and Elizabeth Hesser. New York: Funk & Wagnalls Company, 1950. Cloth. Pp. 276. Price $3.75.

Mrs. Kepler and Mrs. Hesser have collaborated on this book which is to be practical—"concise, to the point, and pleasant to read. It is designed for every young mother who wants her child fed correctly, but who would also like to have fun in the doing." Mrs. Hesser is a qualified dietitian and a mother of three, while Mrs. Kepler writes a daily column, "The Child of Today," for the Durham, North Carolina, *Herald*.

In presenting the material, the authors have attempted to incorporate information on what foods to offer the young child, ways of preparing it, and suggestions on how to get him to eat it. New ideas and recipes are abundant and will be welcomed by those who want to plan something different. The chapters on preparation of foods and new ideas for children's foods are collections of hints, many of which will add variety and interest to the family menu

Questions as to what foods are suitable for children whether fried foods, those that are spiced and seasoned, or the strongly flavored ones such as cabbage, should be permitted in a child's diet are questions that have been debated perennially by dietitians and nutritionists. In recent years, with a more liberal attitude being taken toward the child and his food, many of the traditional taboos on certain foods as unfit for children have been relaxed. The authors, however, feel that fried foods should not be given to a child under six; that "spaghetti sauces, some canned soups, and canned meat dishes are too highly seasoned for little ones"; that ham, sausages, frankfurters, and spiced luncheon meats should not be served to children under four; and that while the youngster over four may have blackberries, raspberries, figs, and pineapple in moderate amounts, they are unacceptable for the two- or three-year-old. Similar restrictions are placed on hot breads, including waffles and pancakes, desserts rich with shortening or cream, pastries and pies, nuts, corn, dried peas and beans, and the "gaseous" vegetables.

One of the outstanding chapters is devoted to party suggestions—one for each month in the year, a snow party in January, a Valentine party in February, and so on.

The organization of the book makes it difficult to follow and detracts from its ease in reading. For example, chapter five considers meal planning, but the charts provided as a guide are not included until after chapter eleven, thus dissipating the effectiveness of some of the important points.

The writing style is intended to give a feeling of lightness and humor, and children are often referred to by various terms, such as little people, your Curlylocks, the half-pint trade, your darling, and others. At times this gives an impression of flippancy which probably was not intended. Occasionally the vocabulary and terminology include words that are infrequently used and, as a result, the average reader may find the meaning a little obscure.

The chapters are summarized by listing the important points made in the discussion under the headings, "The Good Mother DOES. . . . But the Wise Mother DOESN'T. . . ." Since feeding, although extremely important, is only one phase of the child's care, labeling a mother as good or wise only on the basis of her performance (or lack of performance) in this one area seems questionable.

Nevertheless, the person looking for new ideas and ways of preparing for children will find some helpful hints in *Food for Little People.—Lorraine Weng, State University of Iowa, Iowa City.*

**Laboratory Manual and Work Book in Microbiology of Foods.** By Fred. W. Tanner. Champaign, Ill.: The Garrard Press, 1950. Not bound, punched for notebook. Price $4.75.

This book can perhaps be described best as a compendium of methods which are of use in the field of food bacteriology. It is not a laboratory manual in the sense of being composed of definite instructions for each of a series of experiments. Rather, the author has brought together from the literature methods which have been described for use in the bacteriological evaluation of foods. In many cases descriptions of laboratory methods are reproduced from the original source in their entirety. All methods which are applicable to a given food are assembled into one unit or section. There are eighteen such sections in addition to five units dealing respectively with general information, techniques of special importance to food bacteriology, yeasts, molds, and sanitation.

This book will be valuable to anyone needing to have at hand methods for bacteriological study of many types of food. It will be disappointing to any teacher who expects to find lessons planned as such. More than adequate amounts of material for the laboratory work in a college course in food bacteriology are presented, but it would need to be arranged and adapted. The emphasis of the book is that of sanitary control and bacteriological standards for food rather than production processes. Methods applicable to the study of food-borne infections and intoxications are not included. The book contains a list of reference books and journals of importance to the food bacteriologist. The sheets are punched for use in loose-leaf notebooks.—*Dorothy L. Hussemann, Ph.D., Professor of Home Economics, University of Wisconsin, Madison.*

**An Alphabet for Gourmets.** By M. F. K. Fisher. New York: The Viking Press, 1949. Cloth. Pp. 253. Price $3.

*An Alphabet for Gourmets* is the newest volume by the author of those other delightful books—*How to Cook a Wolf*, *Consider the Oyster*, and *Serve It Forth*.

From "A is for dining alone," Mrs. Fisher covers such diverse subjects as Bachelors, Cautious, Dining Out, Exquisite, Family, Gluttony, Happy, Innocence, Juvenile Dining, Kosher, Literature, Monastic, Nautical, Ostentation, Peas, Quantity, Romantic, Sad, Turbot, Universal, Venality, Wanton, Xanthippe, Yak, and Zakuski.

The pleasures of food and drink with friends, with intimates, with family, and alone are told by this author. Much of the book is amusing and not a little astounding. Some of her brilliant bits include a discussion of the "fruit cup, without which no Chamber of Commerce luncheon is complete"; and the recipe for cooking an egg—"by a shrew and by a woman in love."

Many interesting recipes are scattered through the book, making it of interest to the reader-gourmet, as well as to the diner-gourmet.—*Virginia Monahan Bayles, Department of Home Economics, University of Colorado, Boulder, Colorado.*

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# Current Literature

*Contributed by Janette C. Carlsen and Ethel M. Miller, The Johns Hopkins Hospital, Baltimore; Elva A. Hiscock, University of Illinois College of Medicine, Chicago; Pauline Kegereis, The Children's Mercy Hospital, Kansas City, Missouri; Berdena Rosenow, University of Kansas Medical Center, Kansas City, Kansas; Dietary Staff, Wesley Memorial Hospital, Chicago; Mildred Bonnell and administrative interns, University of Washington, Seattle; and the Journal staff.*

## THE AMERICAN JOURNAL OF NURSING

*Vol. 51, January, 1951*

*Psychologic implications of early child care. H. Bakwin.—p. 7.

Paternalism in employer-employee relationships. H. L. Sheppard and A. P. Sheppard.—p. 16.

**Psychologic Implications of Child Care.** No longer is mortality the sole measure of a successful program of child care. The psychologic aspects of pediatrics are discussed here, and considerable emphasis is placed on breast feeding.

## THE AMERICAN JOURNAL OF PHYSIOLOGY

*Vol. 164, January, 1951*

*Influence of previous dietary protein and of ACTH on blood glucose concentration of fasting rats. P. Handler and R. S. Georgiade.—p. 131.

**Dietary Protein and Blood Sugar Regulation.** In previous experiments the fasting animal has been used in the study of carbohydrate metabolism. In this investigation it was found that the behavior of the blood glucose of starving rats was profoundly modified by the nature and quantity of dietary protein previous to this fast. Animals fed low-protein diets were not capable of maintaining their blood sugar levels during the fast. It was also found that animals fed gelatin-supplemented diets could not maintain blood glucose levels. These rats were hypersensitive to insulin, but the fasting hypoglycemia could be abolished readily by administration of ACTH.

## AMERICAN JOURNAL OF PUBLIC HEALTH

*Vol. 41, January, 1951*

*Consumer practices in the use of milk. E. F. Phipard.—p. 45.

**Milk Consumption in the World.** Milk consumption varies throughout the world from none to about 3½ cups per day per person. The Scandinavian countries, Switzerland, and the Netherlands have a higher consumpion rate than the U. S. The influence of food habits and income on milk consumption are discussed, as is the need for increasing its use in this country. Means of accomplishing this are also considered.

## ARCHIVES OF PEDIATRICS

*Vol. 67, October, 1950*

Influence of breast feeding on facial development. F. M. Pottenger, Jr., and B. Krohn.—p. 454.

*Vol. 67, December, 1950*

*Psychic factors in obesity. Observations in over 1,000 cases. I. Bram.—p. 543.

**Psychic Factors in Obesity.** Psychotherapy is of primary importance in the prevention and management of obesity, serving (a) to effect a more satisfactory adjustment between the patient and his problem, and (b) to educate the patient to adopt a rational attitude toward a preliminary submaintenenace and eventual maintenance diet in the achievement and perpetuation of normal weight. Several case histories are presented.

## BULLETIN OF THE JOHNS HOPKINS HOSPITAL

*Vol. 88, January, 1951*

*Marked lipemia resulting from the administration of cortisone. A. R. Rich, T. H. Cockran, and D. C. Coon.—p. 101.

**Lipemia and Cortisone.** A series of fifty-seven male albino rabbits was given an unrestricted amount of Purina Rabbit Chow Checkers. It was found that the daily administration of 7.5 mg. cortisone produced a marked degree of lipemia, with a rise in both total fatty acids and total cholesterol of the serum, plus striking deposits of visible fat in the liver. There was no constant parallelism between the degree of lipemia and the degree of glycosuria.

## THE INDIAN JOURNAL OF MEDICAL RESEARCH

*Vol. 38, January, 1950*

Comparative nutritive value of milk and curd. A. R. Sundararajan.—p. 29.

*The vitamin D content of butter and ghee (clarified butter). P. K. Dikshit and S. Ranganathan.—p. 37.

Fortification of ground-nut milk with calcium and its availability to albino rats. M. N. Moorjani and V. Subrahmanyan.—p. 59.

*Vol. 38, April, 1950*

*Comparative values of vegetable-milk protein and casein for the formation of blood proteins. M. N. Moorjani and V. Subrahmanyan.—p. 145.

*Phrynoderma: clinical and biochemical investigations. P. S. Menon, P. G. Tulpule, and V. N. Patwardhan.—p. 173.

*Vol. 38, July, 1950*

Studies on the urinary excretion of riboflavin and thiamine in Indian adults. B. V. Rama Sastri, R. Mukundan, and V. N. Patwardhan.—p. 213.

Studies in protein metabolism. Further observations on the influence of dietary protein on urinary nitrogen excretion. P. V. Karambelkar, V. N. Patwardhan, and A. Sreenivasan.—p. 241.

**Vitamin D Content of Butter.** Three samples of ghee (clarified butter), three samples of butter, and one sample of egg yolk were assayed for vitamin D and were found to be much richer than reported in the literature. The conclusion was that the indigenous samples were richer in vitamin D than the corresponding samples in temperate climates. In this enrichment of vitamin D, it is presumed that the tropical sun plays the chief role.

**Vegetable-Milk Protein and Casein.** A study of the comparative efficiencies of the vegetable-milk protein (made from the ground-nut and soya bean) and casein, when fed at the same nitrogen level, demonstrated the protein of the vegetable milk to be about 91.8 per cent as efficient as casein for the purpose of hemoglobin regeneration; in regard to red blood cell formation, it was 70.2 per cent as efficient as casein. The vegetable-milk protein was as satisfactory as casein in maintaining total serum protein and albumin levels.

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**Phrynoderma.** Results of this investigation support the hypothesis that phrynoderma is a manifestation of essential fatty acid deficiency. In patients suffering from phrynoderma, the values for the iodine number of plasma fatty acids were significantly less than those found in subjects of comparable age and living on the same diet but who were free from phrynoderma. Treatment with gingelly oil alone yielded good therapeutic results. The cure was accompanied by an increase in the unsaturation of plasma fatty acids.

## JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

*Vol. 145, January 13, 1951*

*Recent advances in diagnosis and treatment of deficiency diseases. T. D. Spies.—p. 66.

*Vol. 145, January 20, 1951*

*Relief of prickly heat with vitamin C. R. L. Stern.—p. 175.

*Vol. 145, February 3, 1951*

*Nephrocalcinosis. W. J. Engel.—p. 288.
*Q fever studies in Southern California. R. J. Huebner and J. A. Bell.—p. 301.
*Observations on the epidemiology of Q fever in Northern California. E. H. Lennette and W. H. Clark.—p. 306.
Food acids and caries. Editorials and Comments.—p. 321.

*Vol. 145, February 10, 1951*

*Effects of pituitary adrenocorticotropic hormone (ACTH) in rheumatoid arthritis. H. M. Margolis and P. S. Caplan.—p. 382.
*Salt depletion syndrome associated with decompensated cirrhosis of the liver. H. L. Holley and J. S. McLester.—p. 392.
*Effectiveness of synthetic water-soluble vitamin K preparations in bishydroxycoumarin-induced hypoprothrombinemia. R. S. Overman, C. W. Sorenson, and I. S. Wright.—p. 393.

**Deficiency Diseases.** This discussion of nutritive failure includes two case histories and a review of therapy with folic acid and vitamin $B_{12}$.

**Prickly Heat and Ascorbic Acid.** During the second world war and later, several investigators found that synthetic ascorbic acid given orally relieved prickly heat, even though patients exhibited no clinical signs of deficiency.

**Nephrocalcinosis.** Whatever the cause of nephrocalcinosis, treatment should include a low-salt diet containing adequate calcium and normal amounts of vitamin D. Several case histories are presented.

**Q Fever Studies.** The study of 300 cases of Q fever provided evidence that the chief factor in the spread of the disease to man is association with infected livestock or the use of some of their raw products. The only known control of the disease is universal pasteurization of milk and the vaccination of groups of people likely to be exposed due to their occupation.

**Q Fever in Northern California.** This article offered much the same information as the preceding one, with an additional suggestion concerning the port of entry in man. It was concluded that human infection may occur through ingestion or inhalation of the Rickettsia.

**Effects of ACTH.** Data collected by these authors led them to conclude that the diabetogenic effect of ACTH presents no serious problem in clinical usage provided the patient does not have diabetes before treatment.

**Salt Depletion and Cirrhosis.** Salt depletion syndrome was produced in two patients with decompensated cirrhosis of the liver by repeated removal of ascitic fluid. There was evidence that the use of salt-free diets and mercurial diuretics hastened this deficiency complex.

**Vitamin K.** Studies confirmed the effectiveness of water-soluble vitamin K preparations in counteracting excessively prolonged prothrombin times, which had been produced during the treatment of thromboembolic conditions.

## THE JOURNAL OF BIOLOGICAL CHEMISTRY

*Vol. 188, January, 1951*

*Two blocks in carbohydrate utilization in the liver of the diabetic rat. S. S. Chernick and I. L. Chaikoff.—p. 389.

**Carbohydrate Utilization in the Liver.** A new method of studying the enzyme systems affected by diabetes is available with the use of $C^{14}$-labeled compounds. In previous studies it was found that utilization of added glucose is impaired in the diabetic liver. To find where the capacity of the diabetic liver was blocked, a comparison was made of utilization of $C^{14}$-labeled glucose, fructose, and acetate in normal and diabetic livers. The results indicated that two metabolic lesions cause impaired utilization in the diabetic liver. The first is the conversion of glucose to fructose-6-phosphate. The second involves conversion of a "2-carbon-like" intermediate to fatty acid.

## THE JOURNAL OF NUTRITION

*Vol. 42, December, 1950*

*Artificial enrichment of white rice as a solution to endemic beriberi. J. Salcedo, Jr., M. D. Bamba, E. O. Carrasco, G. S. Chan, I. Concepcion, F. R. Jose, J. F. deLeon, S. B. Oliveros, C. R. Pascual, L. C. Santiago, and R. C. Valenzuela.—p. 501.
Vitamin A utilization studies. IV. Relative utilization of vitamin A alcohol, vitamin A acetate and vitamin A natural esters as affected by variations in dosage level, quantity and character of diluent, and quantity of dietary fat. E. F. Week and F. J. Sevigne.—p. 525.
The hemoglobin concentrations, erythrocyte counts, and hematrocrits of selected Louisiana elementary school children. M. McBee, D. S. Moschette, and C. Tucker.—p. 539.
*Vitamin A stores of sucklings following administration to the dams of vitamin A in oily and aqueous media. A. E. Sobel and A. A. Rosenberg.—p. 557.
*The nitrogen-sparing effect of dietary carbohydrate in its relation to the time factor. Experiments with repletion of protein-depleted adult rats, E. Geiger, R. W. Bancroft, and E. B. Hagerty.—p. 577.

**Beriberi in Bataan.** Beriberi has recently ranked second to tuberculosis as the cause of death in the Philippines. In this study, 63,000 people in Bataan have used enriched rice exclusively since October, 1948. Clinical examinations of about 12,000 persons prior to and subsequent to inauguration of enrichment, showed a decline of 76 to 94 per cent in the incidence of beriberi. In an adjacent control area (29,000 population), the incidence rose somewhat during the same period. Infantile beriberi mortality declined 53 per cent during the time when the introduction of enriched rice took place, although enrichment was only in effect the last nine months of the year. There is evidence of a less conclusive character of the favorable effect of enriched rice on mortality from all causes and specifically mortality from tuberculosis.

**Vitamin A Stores in Suckling Rats.** The vitamin A stores in suckling rats whose dams were given vitamin A in an aqueous dispersion were about four times as great as the stores in suckling rats whose dams received the same amount of vitamin A dissolved in oil. In view of previous studies on milk transfer, the conclusion may be drawn that orally ingested vitamin A in an aqueous dispersion is more effectively transferred to milk and stored in the suckling than vitamin A in an oily solution.

**Nitrogen-Sparing Effect of Carbohydrate.** Using protein-depleted adult rats, the effect of the time factor in the feeding of protein and carbohydrate has been investigated. It was found that the nitrogen retention and growth of the rats which received protein and sugar simultaneously were considerably higher than those of the rats which received these two food substances separately. The protein-sparing and growth-promoting effects of simultaneous feeding were demonstrated for a period of fourteen days.

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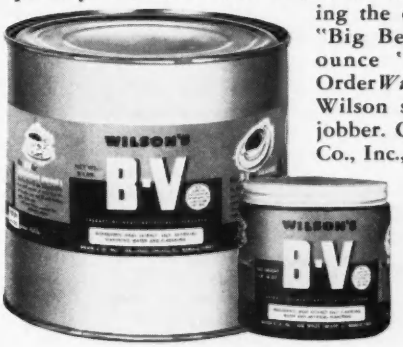


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## JOURNAL OF PEDIATRICS

*Vol. 38, January, 1951*

Later status of juvenile diabetics. C. W. Daeschner, R. W. Deisher, and A. F. Hartman.—p. 8.

*A clinical study concerning the value of Biolac. III. Effect of changes introduced in new improved Biolac upon growth of young infants. S. Hazard, C. A. Smith, and F. Denton.—p. 18.

*An evaluation of a carbohydrate-phosphoric acid solution in the management of vomiting. J. E. Bradley, L. Proutt, E. R. Shipley, and R. H. Oster.—p. 141.

**New Improved Biolac.** The composition of a commonly used infant food, Biolac, has been altered by the substitution of coconut oil and destearinated beef fat for the milk fat originally used, and by replacement of about 60 per cent of the lactose content by a maltose-dextrin combination. To determine the effectiveness of this preparation, twenty-four matched pairs of infants were studied through the first six months of life. One infant of each pair received the new food, the other received a conventional evaporated milk, corn sirup, and water formula. Physical, roentgenological, and hematological measurements were made. By this study technique, new improved Biolac appeared to be an entirely satisfactory food for promoting proper growth in young infants.

**Management of Vomiting.** The use of an oral carbohydrate-phosphoric acid solution to stop vomiting presents a novel therapeutic approach. The results from its use strongly suggest that it is effective in restoring cellular utilization of carbohydrate by repairing a defect in the continuity of carbohydrate metabolism. Cessation of vomiting occurred in all of the 172 cases of epidemic vomiting. Of 43 infants suffering from regurgitation, 29 responded favorably. Fifteen of 17 patients with toxic vomiting responded favorably. Motion sickness was prevented in 11 children regularly subject to nausea when traveling in vehicles. Three patients with vomiting due to pyloric stenosis did not respond.

## SOUTHERN MEDICAL JOURNAL

*Vol. 44, February, 1951*

*Nutrition in relation to the soil. C. W. Woodruff.—p. 161.

**Nutrition and the Soil.** The relationship between soil fertility and nutritional quality of food is discussed. There is a tremendous need for continuing research on an expanding scale until all of the factors involved in food production can be appreciated. The hypothesis must be proved or disproved that a causal relation exists between soil fertility, fertilizer practice, and certain human diseases and agricultural practices.

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## AMERICAN RESTAURANT MAGAZINE

*Vol. 35, January, 1951*

How to win more customers and build appetities. J. B. O'Meara.—p. 42.

*Customers approve quick opinion poll.—p. 56.

*Essentials of good planning.—p. 110.

**Training Restaurant Sales Girls.** This is the first of a series of articles on winning more customers and building appetites. Emphasis is placed on the training of waitresses. The points emphasized are: posture and appearance, sanitary habits, intelligence in regard to menu, serving food with proper utensils, and concentration on good service rather than tips.

**Customer Relations.** Closer customer relations have been established in a restaurant in Tacoma, Washington, through an opinion poll. Customer reaction was checked on eight points: dining room atmosphere, extra coffee without charge, service, quiet dining room, cleanliness, quality of food, moderate prices, and the use of lace tablecloths. The results of the poll will enable the restaurant to plan more effective promotion and merchandising efforts.

**Kitchen Planning.** The basic requirements for an efficient, successful food operation are discussed by a food service equipment engineer.

## COLLEGE AND UNIVERSITY BUSINESS

*Vol. 10, January, 1951*

*Seven simple steps in food cost control. C. Ricker.—p. 46.

**Food Cost Control.** Whether an accounting system is simple or complex, the determination of food costs must involve the following: specifications, purchase orders, inspection of food deliveries, receiving reports and requisitions, inventories, payment orders, and financial reports. These subjects are elaborated in this article.

## FOOD INDUSTRIES

*Vol. 23, January, 1951*

*The talk of the industry.—p. 7.

*Income rise, cutback in durables point to more food sales in '51.—p. 8.

Chemicals vs. foods: round two.—p. 50.

**Food Talk.** Concentrated fresh milk introduced on the market in November is selling well in stores, but not so well on home-delivery routes. . .Centrifugal agitation of "fluid" canned foods during retorting to speed heat transfer has made possible the sterilization of fresh milk in No. 10 cans for shipment from the Northwest to Alaska as well as better texture and vitamin content of several types of canned foods. . .A Louisiana technologist is developing a new process of dehydrating foods without heat by recirculating air at room temperature over the product and through a desiccant.

**Production Trends.** Income rises and a cutback in durable goods point to more food sales in 1951. Inventories, from which a good share of the nation's food must be drawn, look small compared to the prospective increase in sales. Inventories of all canned items at the beginning of the year may be less than 10 per cent above those held on January 1, 1950, and stocks of meat in cold storage were less than 10 per cent above 1949 holdings on November 1. Current output of processed foods is rising gradually. A definite uptrend has started in the sale of bakery products.

## INSTITUTIONS MAGAZINE

*Vol. 28, January, 1951*

*Multiple detergent spares hands while cleaning pans.—p. 2.

Cod provides egg white substitute.—p. 15.

*King size fruits.—p. 15

**King Size Fruits.** The Department of Agriculture has announced the development of a genetic technique known as "polyploidy" which makes possible the production of larger fruit.

**Multiple Detergent.** Reported here is a detailed account of the requirements of a good detergent and the history of the progress made in discovering a multiple detergent which spares the hands and also fulfills its purpose.

## JOURNAL OF HOME ECONOMICS

*Vol. 43, January, 1951*

*A program in community nutrition. M. Lowenberg.—p. 12.

*Food mixes and frozen foods. M. Morr.—p. 14.

"You Know, Doctor—

*I'm enjoying my meals*

*so much more since*

*you told me about*

# DIETETIC TUNA

**TYPICAL** average composition of drained contents

| | |
|---|---|
| Total solids | 30.6% |
| Protein | 28.3% |
| Fat | 0.75% |
| Cholesterol | .07% |
| Sodium | 70 mg.% |
| Iodine | 17 mcg.% |
| Fluorine | 20 ppm |
| Riboflavin | 116 mcg.% |
| Niacin | 13.7 mg.% |
| Animal Protein Factor ($B_{12}$) | 12 mcg.% |

(122 calories per 100 grams)

**WELL PROPORTIONED** combination of all essential amino acids

(Values given as percent of protein)

| | |
|---|---|
| Arginine | 5.2 |
| Histidine | 5.7 |
| Isoleucine | 4.7 |
| Leucine | 7.0 |
| Lysine | 8.3 |
| Methionine | 2.8 |
| Phenylalanine | 3.5 |
| Threonine | 4.1 |
| Tryptophan | 1.1 |
| Valine | 5.2 |

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DIETETIC TUNA ranks high among foods with extremely desirable biological value. It is high in protein, contains all the essential amino acids, is easily digested, quickly assimilated. Its protein is nutritionally equivalent to that of meat or milk.*

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*Dunn, M. S.: The Nutritional Value of Fish Proteins, Institute of Food Technologists, San Francisco meeting, (July) 1949. Geiger, E.: Nutritive Value of Fish Protein, Progress in the Chemistry of Organic Natural Products, Ed. by L. Zechmeister, 5:275, 1948.

**Community Nutrition.** Rochester, Minnesota, has developed a community nutrition program based on cooperation of nutritionists and allied persons. The first part of the community nutrition work is concerned with the pregnant women and nursing mothers. The second part is concerned with mothers of children from birth to six years. The third part of the program is carried out through the public and parochial schools by interested teachers and the school lunch managers. Some factors learned in the Rochester program are: (a) Professionally trained home economists have an obligation to provide leadership to their communities. (b) Cooperating groups need projects to sustain interest. (c) The public health nurse is the center of any nutrition program.

**Food Mixes and Frozen Foods.** At Michigan State College in the course on consumer buying of food the comparative cost of home-mixed and prepared mixes was studied for apple pie and devil's food cake. The home-made products showed a better flavor, larger yield, and a slightly smaller cost. The cost of frozen, canned, and fresh peas and orange juice was also compared. The canned product was less expensive; also there was a large price variation in the fresh product. Frozen foods greatly reduce preparation time.

## NATION'S SCHOOLS

*Vol. 47, January, 1951*

*Cafeteria planning. H. Crane.—p. 62.

**Cafeteria Planning.** Both the elementary and secondary cafeterias in the Los Angeles area have incorporated some new features to expand and improve their services. One feature has been to provide separate dining areas for the pupils and teachers. The other outstanding improvement was that of providing service for pupils who do not wish to come into the cafeteria but wish to supplement home-packed lunches. This has been done by utilizing an exit or window for the service unit and providing extra equipment, such as an ice cream freezer, a roll warmer, and beverage cabinets. Equipment and storage space have been improved also.

## RESTAURANT MANAGEMENT

*Vol. 68, January, 1951*

Controlling a cafeteria line.—p. 28.

Modern miracles with food. P. P. Logan.—p. 29.

*How we saved steps by installing a centralized pantry-kitchen. G. Cordes. —p. 32.

*Time and labor-saving short cuts in the kitchen. A. Easton.—p. 38.

**Centralized Pantry Kitchen.** A long narrow restaurant presents problems in distances which must be walked by employees. The solutions worked out by an Idaho coffee shop are presented, including details and a floor plan. More efficient service was built by constructing a short-order kitchen and a pantry in the center section and using a conveyer belt to carry meals from the rear kitchen.

**Time- and Labor-Saving Short Cuts.** To combat the rising cost of food production, various suggestions are made to help a manager reduce preparation time. Included are ideas using canned goods, peeled potatoes, aluminum foil, powdered milk, and equipment for meat cookery. Recipes accompany the suggestions.

**Late Supper Dishes.** Pictured and described are six appealing suggestions for midnight snacks designed for quick preparation in restaurants. The suggestions could be adapted to luncheon menus.

## BIOGRAPHICAL NOTES FROM THE HISTORY OF NUTRITION

### Otto Folin—April 4, 1867—October 25, 1934

Until 1905, there were no records of complete analysis of a normal, 24-hr. sample of urine. At that time, Folin published analyses of thirty "normal" urines from subjects maintained on one standard, uniform diet. From these studies, Folin showed a fixed principle in the chemistry of metabolism: that the "absolute quantity of creatine eliminated in the urine on a meat free diet is a constant quantity different for different individuals, but wholly independent of quantitative changes in the total amount of nitrogen eliminated." Folin also developed the theory of two types of protein metabolism—exogenous and endogenous.

Otto Folin came to this country in 1882, having been born in Asheda, Sweden, on April 4, 1867. He received his B.S. degree from the University of Minnesota and his Ph.D. from the University of Chicago. Then he studied in Germany and Sweden. Returning to this country, he became Assistant Professor of Physiological Chemistry at West Virginia University for a year, then research Chemist at McLean Hospital, Waverly, Massachusetts, for eight years. In 1907, he was appointed Professor of Biological Chemistry at Harvard Medical School.

Dr. Folin made marked contributions in nutrition, particularly in nitrogen metabolism, and devised a number of quantitative methods for biochemical determinations. He was a clear and original thinker, and clarity and simplicity along with occasional humor marked his lectures. Simplicity, too, was the keynote of his biochemical methods and theories; he knew that a simple method would be more useful than a complicated one. Dr. Wu, who worked with him, says that his personality was simplicity itself; he lived between his home and his laboratory. Outside of research, golf was his only interest. He lived and dressed simply. He lunched alone in his laboratory everyday and always had the same lunch—a few slices of bread liberally buttered, a pint of milk, and at least half a liter of strong coffee.

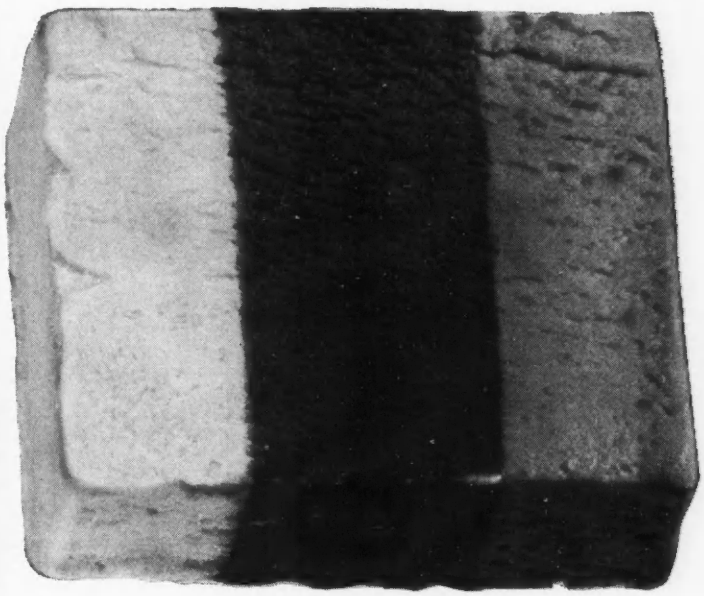
References:

Otto Folin's original research papers

Chittenden, R. H.: The First Twenty-Five Years of the American Society of Biological Chemists. New Haven, Conn.: American Society of Biological Chemists, Inc., 1945.

Wu, Hsien: Personal communication

*—Contributed by E. Neige Todhunter, Ph.D., Head, Department of Foods and Nutrition, University of Alabama, Tuscaloosa.*



**"The dietary flag of the U.S.A. . . ."**

What would be your guess as to the food you might hear mentioned most frequently anywhere in the world as "typically American"? Ten to one it would be ice cream.

"Ah, sí, Señor... your ice cream! It is as familiar as your flag. You might call it the dietary flag of the U.S.A. We have heard how everybody in the States eats ice cream... for breakfast, lunch and dinner. Nowhere else in the world will you find such luxury."

The exaggeration makes you laugh. As a physician, you would be tempted to remind your foreign friend that ice cream is a valuable food as well as a treat. Ice cream contains, in highly palatable form, all the known food elements essential to health—proteins, fats, carbohydrates, minerals and all the vitamins for which dietary allowances have been established, in quantities ranging from small amounts of vitamin C and iron to liberal amounts of calcium and riboflavin. No wonder you frequently include ice cream in the special diets you prescribe.

Borden's ice cream is used in American hospitals in large quantities, for dietitians know that acutely ill or convalescent patients eat ice cream when they refuse to touch most any other food. Dietitians know, too, that they can depend on Borden's ice cream to be of uniform high quality, day in and day out. You too can depend on the quality of all Borden foods.

Manufacturers and distributors of BORDEN'S Beta Lactose, BIOLAC infant food; DRYCO infant food; KLIM powdered whole milk; MERRELL-SOULE Powdered Skimmed Milk; MULL-SOY hypoallergenic food; BORDEN'S Evaporated Milk, STARLAC non-fat dry milk, Instant Coffee, Fresh Milk, Ice Cream & Cheese.

**The Borden Company**

350 Madison Avenue, New York 17, N. Y.

# A.D.A. PHOTOGRAPHIC CONTEST

The American Dietetic Association announces a contest for photos showing the activities and life of dietitians and nutritionists. Anyone may enter. The contest opens April 1 and closes June 15.

***Prizes will be Cash Awards***

| | |
|---|---|
| **1st** | **$75** |
| **2nd** | **35** |
| **3rd** | **15** |
| **15 Prizes** | **5** |

**Rules:**

1. The contest is open to anyone. CONTEST OPENS APRIL 1 AND CLOSES JUNE 15, 1951. No entry fee is required.
2. Any number of black and white glossy prints may be submitted by an entrant. Prints must be 8 x 10. No acknowledgment of receipt of entries will be sent, unless entrants enclose an addressed postal card to be signed and returned.
3. Subject matter is restricted to the life and activities of dietitians and nutritionists. The central figure should be a dietitian or nutritionist in a job or training situation. A close-up, action picture is preferable. The setting may be outdoor or indoor. When a white uniform is worn (it should be worn if the job situation requires one), all of the details concerning the uniform and other articles of apparel should be correct—i.e., uniforms long-sleeved and well-pressed; hair neatly dressed; no caps; no handkerchiefs in pockets, no conspicuous jewelry as earrings or large rings; conservative white shoes (no wedgies, no high heels, no ankle straps). IF POSSIBLE, CONSULT AMEMBER OF THE AMERICAN DIETETIC ASSOCIATION ON CORRECTNESS OF DETAILS SUCH AS DRESS, EQUIPMENT AND SURROUNDINGS SHOWN IN THE PICTURE.
4. Prints may be either mounted or unmounted.
5. Pictures which have been published in, or accepted for publication or are under consideration by any women's or youth magazines are not eligible as contest entries.
6. Each print must be accompanied by a filled-in entry blank as provided here, or facsimile thereof. Please print or typewrite the information requested on the blank. Additional entry blanks are obtainable by writing the Contest Editor of The American Dietetic Association.
7. No entries will be returned until after announcement of the winners. Pictures which do not win prizes will then be returned, provided a self-addressed and stamped envelope, or addressed label and postage are contained in the same package in which each lot of entries is sent. Do not send postage separately for return. The Contest Editor cannot enter into correspondence of any kind regarding entries.
8. Prize-winning prints, including all reproduction and promotional rights, become the exclusive property of The American Dietetic Association. All entrants whose photographs are under consideration for prizes will be required to furnish original negatives before prizes are awarded. All prize-winning negatives become the exclusive property of The American Dietetic Association. Written releases from all persons photographed must accompany the negatives. (Sample releases may be obtained by writing to the Contest Editor.)
9. Judges will be as follows:
   Nowell Ward, Associate of the Royal Photographers Society in London, and winner of photographic awards in the U. S. and Europe.
   Lillian Storms Coover, President, The American Dietetic Association.
   Gilbert Gallaher, Picture Editor, Chicago *Daily News*.
   Decisions of the judges will be final.
10. Address all entries to Contest Editor, The American Dietetic Association, 620 North Michigan Avenue, Chicago 11, Illinois. Final entries must be postmarked not later than midnight of June 15, 1951.
11. Prize winners will be announced in the September 1951 issue of the JOURNAL OF THE AMERICAN DIETETIC ASSOCIATION.
12. While exercising the utmost care in handling entries, The American Dietetic Association assumes no responsibility for loss or damage of contest entries.

---

**USE THIS ENTRY BLANK (PLEASE PRINT)** **1951**

**Contest Editor, The American Dietetic Association**
**620 North Michigan Avenue, Chicago 11, Ill.**

Please enter the enclosed picture in The American Dietetic Association Photographic Contest for 1951.

NAME _____

Street _____

Town _____ Zone _____ State _____

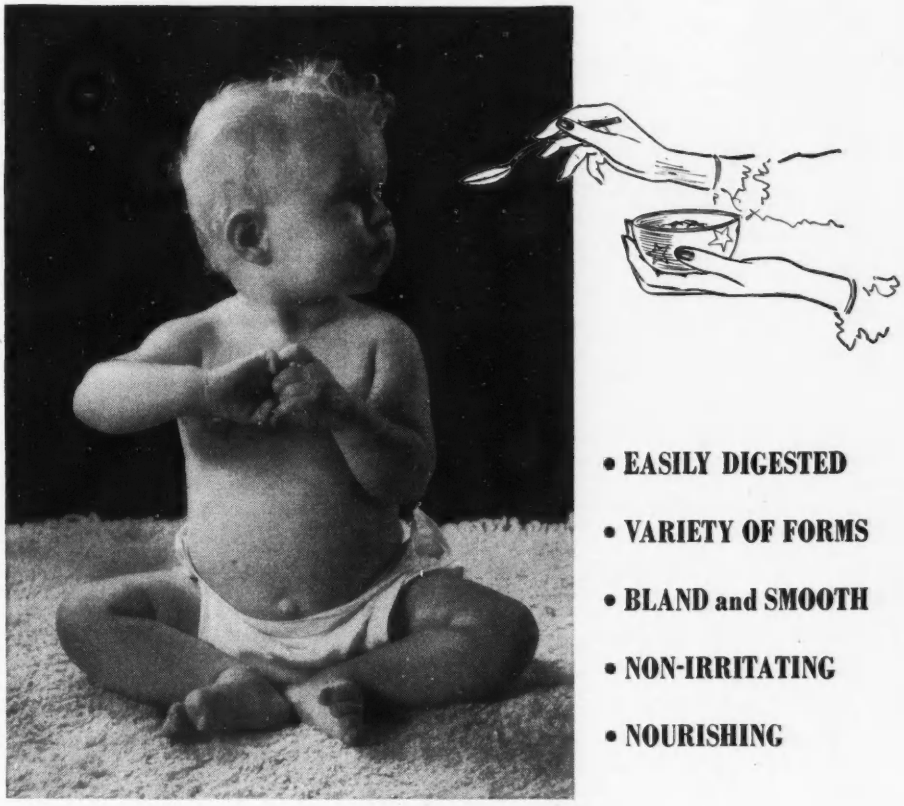
Description of Picture _____

Where Made (hospital or organization) _____

**USE THIS ENTRY BLANK**

Each one of your entries must be accompanied by a filled-in entry blank provided here, or a facsimile of it. Additional blanks may be obtained from the Contest Editor of The American Dietetic Association.

# EGGS...an ideal food for the young



- EASILY DIGESTED
- VARIETY OF FORMS
- BLAND and SMOOTH
- NON-IRRITATING
- NOURISHING

THE egg can be one of the first solid foods given to babies. It is rich in factors conducive to sound gains and growth . . . the structural minerals calcium, phosphorus and iron . . . B-Complex vitamins as well as A and some D . . . and biologically complete protein containing all the essential amino acids.

For the lively youngster with the impatient hunger, eggs are the very thing.

For the convalescent, there is no food quite so calculated to build a bridge from the jaded appetite of the sick person to the active one of the healthy person.

Too, because of their low carbohydrate calory content and protective mineral and vitamin values, eggs are useful in reducing diets.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

*This seal signifies that all statements herein pertaining to nutrition have been found acceptable by the Council on Foods and Nutrition of the American Medical Association.*

## POULTRY AND EGG NATIONAL BOARD

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A NON-PROFIT ORGANIZATION

***Devoted to Research and Education Work in Behalf of the Poultry Industry***

# News Notes

**Certification of Nutritionists.** The Executive Board of The American Dietetic Association at the meeting held in October, 1950, appointed a committee to study the proposed certification of nutritionists by the newly established American Board of Nutrition. Such information as could be obtained at that time concerning the reasons for and proposed uses of certification were incomplete and many members of the Association with the training required for certification had questioned the need and desirability for making application. A detailed report has been prepared by the committee which has been mailed to members of The American Dietetic Association with the Ph.D. in nutrition or a related science. This report is available to other members of the Association on request to the Chicago office.—*E. Neige Todhunter, Betty Steele, Bertlyn Bosley, Callie Mae Coons, Jane Leichsenring, and Margaret A. Ohlson, Chairman.*

**VA Dietetic Institute.** The seventh Institute on Dietetic Service, Department of Medicine and Surgery, Veterans Administration, was held at Hines, Illinois, November 29 through December 7, 1950, with twenty-five dietitians attending.

This was the first institute planned specifically for therapeutic dietitians. The general topics included: a review of normal nutrition; dietetic aspects of certain disease conditions and newer trends in medical treatment; the psychologic approach to effective group and individual teaching; detailed presentation of protein metabolism and interrelated reactions; organization and operation of a nutrition clinic; a radio broadcast with patient participation; inter-departmental care of patients from the social worker's and nurse's viewpoints; and the psychologic significance of food as applied to the patient's dietary guidance.

Participants in the program included members of the medical and dietary staffs, medical consultants, chief of social service, nursing supervisor, chief biochemist, and chief of clinical psychology from Hines, Central Office dietetic representatives, and members of the group. Dr. Charlotte G. Babcock, Psychiatrist; Dorothea Turner, Diet Therapy Representative on the VA Dietetic Advisory Council; June Norman, Nutritionist, Bobs Roberts Hospital, University of Chicago Clinics; and Mary Brakel, Clinic Dietitian, Michael Reese Hospital, Chicago, also appeared on the program.

Dr. Roy Brener, Chief of Clinical Psychology, Hines, conducted five, 40-min. sessions in which he demonstrated the basic principles of group discussion. Prior to the Institute he had familiarized himself with the problems of the therapeutic dietitian through contact with dietitians at Hines and observation of portions of the program there. By example, he pictured the assets and liabilities of group teaching vs. individual teaching. These sessions afforded background material for the evaluation which followed a demonstration of group teaching of diabetic patients by the doctor, dietitian, and nurse, as well as the session conducted by Dr. Babcock on the "Psychology of Feeding."

Dr. Babcock pointed out the psychologically significant factors which warrant the dietitian's careful attention during a nutrition interview. This served as a stimulating introduction to the group discussions. Four small discussion groups were formed, with a leader and recorder for each, in which special problems of the individual dietitians were considered. Dr. Babcock acted as consultant to all groups. Mrs. Turner, Mrs. Norman, and Miss Brakel served as leaders of this phase of the session.

**WHO Nutrition Work.** World Health Organization is giving technical aid through nutrition demonstrations (financed by UNICEF assistance) in a number of countries, including Afghanistan, Burma, Ceylon, India, Indonesia, Japan, Pakistan, the Philippines, Thailand, and various United Kindgodm territories. In India and Pakistan, special attention is given to children in refugee camps... In December, WHO joined forces with the FAO in a survey in Africa to study clinical features of kwashiorkor, a deficiency disease, and to propose remedial action... It has also been announced that in the district of East Bengal, Pakistan, rice and other crops last year showed a 15 per cent increase, while manpower required for agricultural work was reduced by 10 per cent. This progress is a direct result of WHO's malarial-control measures introduced in this region... Japan has applied for full membership in the World Health Organization. The matter will be voted upon at the Fourth World Health Assembly in May.

**FAO News.** The moving of FAO headquarters from Washington to Rome was completed in March. Some 185 members of the FAO staff went with the organization, of whom roughly two-thirds were members of the professional staff.

A North American regional FAO office will be maintained in Washington. The temporary address will be the Dupont Circle Building, 1344 Connecticut Avenue, N. W. This office will operate as do other regional offices, representing the Director-General in the region, providing information about FAO's activities, and reporting on food and agricultural developments. In addition, the regional office will continue the close cooperation that has been well established between FAO's expanded technical assistance program and the U.S. Point IV work, as well as the UN Technical Assistance Board in New York. The regional office, however, will not be responsible for general liaison with UN. This will be worked out between the FAO Rome headquarters and UN headquarters in New York.

**Iowa State to Have Three Summer Workshops.** Announcement has been made that Iowa State College, Ames, will offer three workshops of interest to dietitians this summer.

The first, from July 2 to 21, will be on statistical and research methodology in home economics, and will be offered at the request of the Research Training Committee of the American Home Economics Association. It will be the second such workshop dealing with statistics, and will be planned specifically for persons responsible for directing or conducting research. During the first two weeks, the program will include an introduction to: probability, statistical inference, and tests of hypotheses with special emphasis on analysis of variance and regression techniques. This portion of the workshop will carry 3 quarter hours of graduate credit. The third week will be open to those with previous training in statistics, will carry 1 quarter hour of graduate credit, and will present work of a more advanced nature, centering around individual research problems.

The second workshop—July 5 to 24—will deal with audio-visual aids for vitalizing foods and nutrition teaching and will carry 4 credits. Exhibits, lecture demonstrations, group projects, and individual problems will cover a variety of audio-visual aids useful in teaching foods and nutrition.

The third workshop, from July 25 to August 11, will earn participants 4 credits. The work will be keyed to the interests of college teachers of foods and nutrition and to teaching dietitians engaged in work with nurses, doctors, dentists, dietetic interns, or other professional workers. Members of the class will be given an opportunity to work on individual problems. Teaching dietitians may choose to work on projects included in Curriculum Study of the Approved Dietetic Internships.

Further information about any of these workshops may be obtained from Dr. Ercel S. Eppright, Head, Department of Foods and Nutrition, Iowa State College.

**Summer Courses at Kansas State.** The Departments of Institutional Management and Foods and Nutrition of Kansas State College, Manhattan, are planning several summer courses especially for students whose curricula have not included courses which fulfill minimum

# Menu Marvels

**For steak or chop . . . cold cuts or salads . . . soups or gravies . . . from the Sexton ensemble you can select just the right sauce to give that special savor which spells true guest pleasure. Each Sexton sauce is blended by experts, from rich aromatic spices and other carefully selected ingredients, in our Sunshine Kitchens. Recipes that have earned acceptance and are backed by three generations of serving your special needs. You can be proud to display the Sexton label on your table. It means fine foods, tastefully prepared.**

JOHN SEXTON & CO., CHICAGO. 1951

**THESE TWO TESTS PROVE**

*More Coffee Flavor*

**The moment you open a bag of Continental Coffee you catch its roaster-fresh aroma. It's the *extra* flavor that you smell! And that "More Coffee Flavor" is confirmed when you *taste* Continental. The *extra* fragrance, the *extra* flavor prove to you—as they prove to staff and patients—that Continental's "More Coffee Flavor" provides a richer—more delicious cup of coffee. Today and everyday more than 18,000 different hospitals, institutions, restaurants and hotels, serve millions of cups of Continental Coffee—made more inviting and satisfying through Continental's "More Coffee Flavor". Test Continental yourself, you too will discover the greater appeal of Continental's fragrance—it's far more satisfying flavor.**

*Continental Coffee*

AMERICA'S LEADING COFFEE for RESTAURANTS, HOTELS AND INSTITUTIONS

CONTINENTAL COFFEE COMPANY—CHICAGO 90, ILL.

BROOKLYN 1, N. Y. • TOLEDO 1, OHIO

*Importers, Roasters Member: New York Coffee and Sugar Exchange, Inc.*

MAKERS OF CONTINENTAL'S "76" MENU PRODUCTS

requirements for A.D.A. membership. Courses will be offered at both the undergraduate and graduate levels, and may be taken concurrently by qualified students. Further information may be obtained from Bessie Brooks West, Head, Department of Institutional Management.

**Plentiful Foods.** The U.S.D.A. lists the following foods expected to be plentiful in April:

*Protein foods*

| | |
|---|---|
| Beans, dry | Eggs |
| Chickens—broilers and fryers | Fish—frozen fillets |
| Cottage cheese | Peanut butter |

*Other foods*

| | |
|---|---|
| Apples | Honey |
| Applesauce canned | Potatoes |

**New York Nutritionists Meet.** The semi-annual meeting of Up-state New York nutritionists and home economists in welfare was held in Rochester on Novembers 9 and 10. The main topics on the program were budgeting and nutrition education methods. Dr. Odin Wilhelmy, Jr., Assistant Professor of Biochemistry and Nutrition, School of Nutrition, Cornell University, spoke on food budgets of persons receiving relief. He conducted a workshop covering weighting of prices, food habits and nutrition eudcation, equitable distribution of allotments, and adequate standards for food allowances. A second presentation was that of Mary Karpiak, Public Health Educator, Rochester Health Bureau, who discussed the evaluation of nutrition education materials. Ann Hyer, Audio-Visual Center, Syracuse University, spoke on audio-visual teaching materials.

This group, which has been meeting informally for several years, has now become an organized group with duly elected officers, who are: Chairman, Beatrice Finkelstine, College of Home Economics, Syracuse University; Vice-Chairman, Kathleen Berresford, School of Nutrition, Cornell University, and Tompkins County Health Department; and Secretary-Treasurer, Fanna Rhea Winkelstein, Onondaga Department of Public Welfare, Syracuse. A committee is working on the selection of a name for the group, and it has been decided that it should become affiliated with the New York State Public Health Association and meet jointly with that organization for one of the two semiannual meetings.

**Dr. Todhunter Honored.** Dr. E. Neige Todhunter was named "Woman of the Year" by *The Progressive Farmer* in its February issue "in recognition of her almost ten years active service in the interest of better nutrition for Alabama and more particularly for school children." Dr. Todhunter, who is Director of the Research Laboratory of Human Nutrition and Head of the Department of Nutrition, University of Alabama, Tuscaloosa, is one of three women of the South so honored this year, and the fourth to be named from Alabama.

# For every kind of dishwashing a Wyandotte cleaner is best!

## 3 PRODUCTS FOR HAND DISHWASHING:

### NEOSUDS*

***WHERE CHINA AND SILVERWARE ARE LIGHTLY SOILED***

- Dissolves completely and rapidly
- Works in hard or soft water
- Makes oceans of suds — not a soap
- Dishes and glassware drain dry and sparkling
- Leaves no film, forms no scum
- Inhibits growth of certain bacteria

### KEEGO*

***FOR MACHINE DISHWASHING***

- Counteracts water-hardening calcium and magnesium salts
- Prevents scale formation on machine
- Prevents stains on dishes
- Removes old stains gradually
- Will not attack aluminum, brass or copper
- Will not tarnish silverware
- Rinses completely — no hand-toweling necessary

### KROMET

***WHEN A DETERGENT-SANITIZER IS NEEDED***

- Reduces bacterial accumulations in wash water from millions to mere thousands, allowing for easier and more complete final sanitizing
- Wets out and penetrates soil for faster washing and better rinsing
- Aids quick drying and effectively promotes sparkling-clean glassware
- Easy on the operator's hands
- Economical to use, a little does a lot of work. Effective in hot or cold water

*Reg. U. S. Pat. Off.

### KALSO

***FOR GLASSES AND LIGHT DISHWASHING***

- Very easy on hands
- Makes heavy suds — contains no soap
- Excellent in either hard or soft water
- Only small quantities needed
- Makes glassware crystal clear

### H.D.C.*

***WHEN YOU NEED A HEAVY-DUTY CLEANER***

- Excellent for pots and pans
- Effective in either hard or soft water
- Rinses easily
- Gives satisfactory results at low cost

"Cleaning the World"

**THE WYANDOTTE LINE— *machine dishwashing:*** Keego, Poma; ***hand dishwashing:*** Neosuds, H.D.C., Kalso, Kromet; ***silver detarnisher:*** G.L.X.; ***germicides:*** Steri-Chlor, Spartec; ***for equipment cleaning:*** G.L.X., SR-10 — **in fact, specialized products for every cleaning need.**

**WYANDOTTE CHEMICALS CORPORATION**
Wyandotte, Mich. • *Service Representatives in 88 Cities*

Wyandotte
REG. U. S. PAT. OFF.

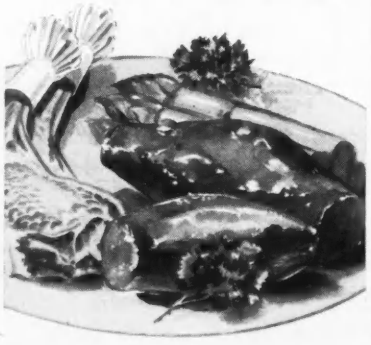
Never a Dull Menu!

These are the yams with real food glamour. Even the simplest plate brightens, looks more appetizing with Louisiana Golden Yams.

These are the moist-textured sweet potatoes, the ones famous for flavor and sweetness and for that characteristic reddish-gold color the appetite finds irresistible.

Glorify your menus with Louisiana Golden Yams. Serve them as a VEGETABLE, as a DESSERT—often.

THEY'RE Sun-er-gized LOUISIANA GOLDEN YAMS



**Dr. MacEachern Receives A.H.A. Appointment.** On March 1, Dr. Malcolm T. MacEachern became Director of Professional Relations of the American Hospital Association. In his new position, Dr. MacEachern will be concerned with Association programs aimed at developing better professional relations in hospitals. In announcing the appointment, George Bugbee, Executive Director, pointed out that Dr. MacEachern's appointment is notirelated to the Association's plans for a hospital approval program now being discussed with other organizations, but that his advice and long experience as Associate Director and Director of the American College o Surgeons will be available.

**Dr. Wilder in New Post.** Dr. Russell M. Wilder has been appointed Director of the new National Institute of Arthritis and Metabolic Diseases of the U. S. Public Health Service. Dr. Wilder retired December 31 as Head, Department of Medicine, Mayo Foundation, and Senior Consultant in Medicine, Mayo Clinic, Rochester, Minnesota.

**Blanche M. Joseph.** Blanche M. Joseph, Executive Dietitian, St. Ann's Maternity Hospital, St. Louis, passed away suddenly December 31, 1950. Miss Joseph, a charter member of A.D.A., was a native of Chicago and had also been employed as a dietitian at Henrotin Hospital and Hull House Coffee Shop in that city.

**Adelaide Murrell Wall.** The recent death of Adelaide Murrell Wall of Bangor, Maine, has been reported to the Association. She had been a member of A.D. A. since 1934, having been employed by the Citizen's General Hospital, New Kensington, Pennsylvania, .Maryland State Teachers College, Frostburg, and the New York State Department of Social Welfare. During the war, she served as a full lieutenant in the Waves.

**Alice Dolman.** Word has been received in the A.D.A. office of the death of Alice Dolman on December 24, 1950. Mrs. Dolman had been a member of the Association since 1921, and a life member since 1929.

**Meetings.** May 7 through 11 are the dates for the annual convention of the *National Restaurant Association*, to be held at Navy Pier, Chiacgo.

The 28th Annual Conference of the *American Physical Therapy Association* will be held June 17 to 22 in Glenwood Springs, Colorado.

**A.H.E.A. Moves.** Announcement has been made that the American Home Economics Association on March 1 moved into its new headquarters at 1600 Twentieth Street, N. W., Washington 9, D. C.

**Planning Food for Institutions.** The Bureau of Human Nutrition and Home Economics, U.S.D.A., has recently issued Agriculture Handbook No. 16, *Planning Food for Institutions*, by Rosalind C. Lifquist and Edith B. Tate. Issued earlier in 1950 in preliminary form, this publication has been prepared to make possible the practical application of principles of nutrition to the diets of the people. It is designed primarily for nutritionists and others called upon to help food managers and administrators plan adequate diets within given budgets, and it has been referred to frequently in the series on "Dietary Consultation—A Service to Small Institutions," currently running in this JOURNAL.

Information is presented in four general sections, under the headings: "Nu-

## Army Announcements Concerning Dietetic Personnel

The following dietitians have received initial appointments in the Women's Medical Specialist Corps Reserve and are on active military duty:

2nd Lt. Gloria S. Beck, R-2600
2nd Lt. Gwendolyn E. Dupree, R-2598
2nd Lt. Claire Tisdale, R-2599
2nd Lt. Virginia Whitlatch, R-2601

The following dietitians are now on active military duty:

1st Lt. Dora L. Ashley, R-2169
1st Lt. Mary A. Armstrong, R-2029
Capt. Marie L. Averill, R-1270
1st Lt. Virginia Boyd, R-2415
2nd Lt. Mary Charlesworth, R-2542
1st Lt. Alice Featherstone, R-1385
1st Lt. Vera E. Kerstell, R-274
1st Lt. Virginia McGary, R-2501
1st Lt. Natalie McIntire, R-1263
1st Lt. Ella McPheters, R-834
1st Lt. Chartley Morley, R-1432
1st Lt. Georgiana Pearson, R-2021
1st Lt. Elizabeth Pope, R-2499
1st Lt. Willa Reed, R-2333
1st Lt. Oweta Ross, R-2486
1st Lt. Ann E. Shea, R-570
1st Lt. Eleanor Storm, R-2476
Capt. Virginia Woodside, R-1213
1st Lt. Avis H. Thyge, R-2424

The following dietitians have been separated from service:

Capt. Ann H. Buckley, R-966
1st Lt. Elizabeth FitzGerald, R-10103
Major Helen Thomasson, R-332

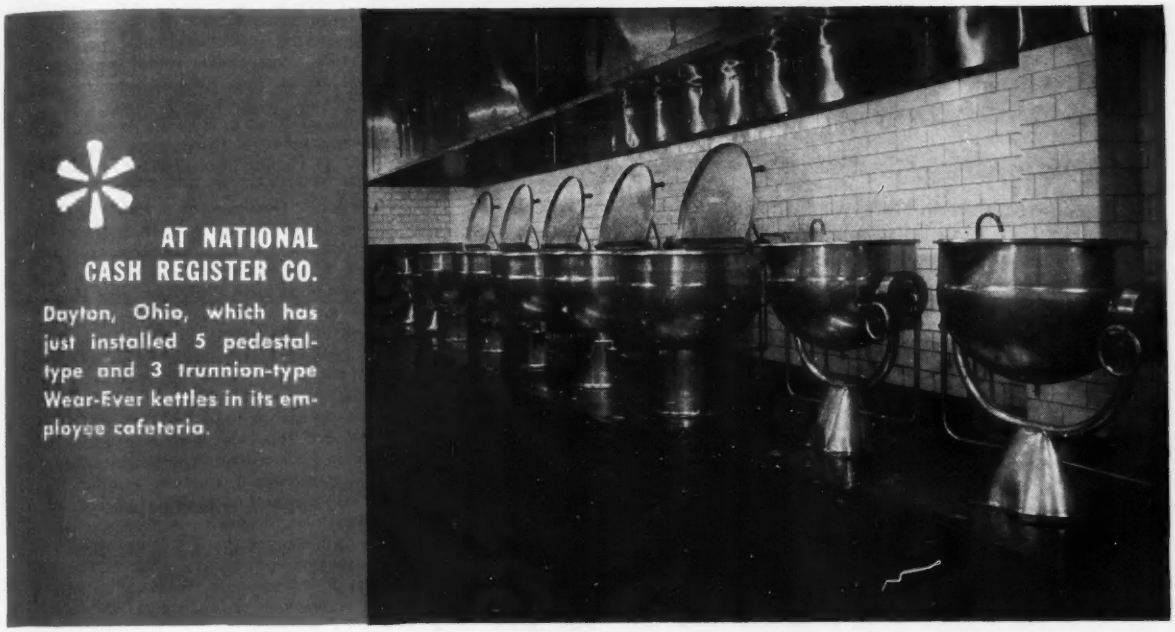
Jean Davis Hinman, R-2550, has been promoted from Second Lieutenant to temporary First Lieutenant.

The following dietitians have received appointments in the regular Army:

*Captains*
Lucile M. Dale, R-10110
Beatrice Goldberger, R-10111
Edith E. Hopkins, R-10113
Eleanor Reimers, R-10114
Ida R. Strickland, R-10112
*First Lieutenants*
Virginia Jones, R-10115
Betty P. Chellman, R-10116

# Where Money Counts*

## IT'S WEAR-EVER ALUMINUM *Steam Jacketed Kettles*



**AT NATIONAL CASH REGISTER CO.**

Dayton, Ohio, which has just installed 5 pedestal-type and 3 trunnion-type Wear-Ever kettles in its employee cafeteria.

The National Cash Register people are especially aware of the importance of providing efficiency through better machines. After all, it's their business.

So when it came to buying steam jacketed kettles for their own industrial cafeteria, it seems only logical they picked Wear-Ever Aluminum after careful consideration.

Two important features influenced their selection. Wear-Ever Aluminum can be depended on for the finest cooking results because it spreads heat fast and evenly. And Wear-Ever kettles can be depended on for *long service* because they're made of THICK, super-tough alloy.

The fact that many Wear-Ever Aluminum kettles have been giving highly satisfactory service for 20, 25 and 30 or more years is a good indication of the way they can save you money through very low depreciation.

Ask us for full details about the types of Wear-Ever Aluminum Steam Jacketed Kettles available, and their many features and advantages. Mail the coupon to: The Aluminum Cooking Utensil Company, 1304 Wear-Ever Building, New Kensington, Pa.

WEAR-EVER *Aluminum*

WEAR-EVER ALUMINUM TRADE MARK REG. U.S. PAT. OFF.

Standard of Quality for more than 50 years

The Aluminum Cooking Utensil Co.
1304 Wear-Ever Building, New Kensington, Pa.

Please send me your catalog sheet of Wear-Ever Aluminum Steam Jacketed Kettles.

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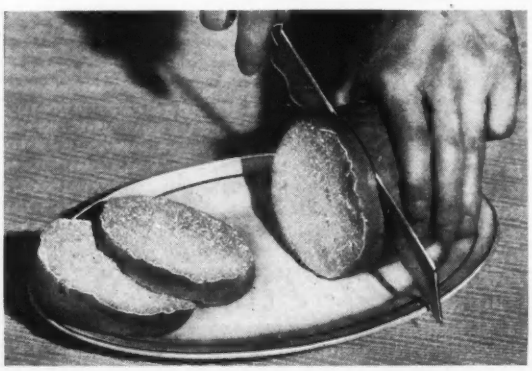
SOYAMAISE
(Salt-Free)

A tangy salad dressing for fresh and cooked vegetables made without added salt. Sodium content 0.036%. Be sure to specify *Salt-Free* Soyamaise



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For the cardiac patient, and others whose sodium intake must be limited. CELLU WHITE BREAD is a yeast bread, prepared without salt or milk. Baked in tins and sealed as soon as it leaves the oven, to protect freshness and flavor.

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DIETETIC SCALE

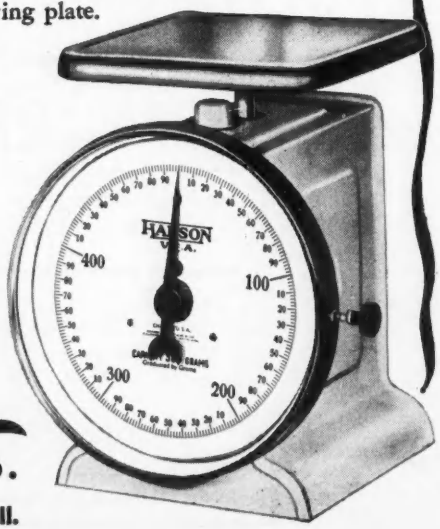
The standard diet scale of the medical profession for controlled diets. Rotating dial eliminates computation as each item of food is added on the serving plate.

Capacity 500 grams by grams. Stainless steel platform, white enamel body, easy to keep clean.

Model 1411 (illustrated) has glass protected dial, price $15.00

Model 1440 enamel dial, price $10.00

*See your Supply House*

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trients Needed for an Adequate Diet"; "Planning Nutritionally Adequate and Satisfying Meals"; "Estimating Quantities of Food for a Nutritionally Adequate Diet"; and "Keeping Food Cost Records." Topics discussed include menu making, records, evaluating dietary and food management practices, and planning food needs in advance. Extensive tables are presented, including low- and moderate-cost food plans for ten persons for thirty days and for one person for one week; conversion figures for use in computing dairy products as milk equivalent and baked products as flour equivalent; purchasing guides for vegetables, fruits, dairy products, meat, poultry, and fish, eggs, nuts, cereal products, baked goods, fats and oils, sugars and sweets, and miscellaneous foods.

This publication is available from the Superintendent of Documents, Washington 25, D. C., at a price of 45 cents a copy.

**Other Government Publications.** *School Lunch Management in Relation to Nutritive Value, Cost, and Acceptance of Foods Served* has been released by the Bureau of Human Nutrition and Home Economics, U.S.D.A., as "PA-114." Prepared by Margaret B. Dresibach and Elizabeth Handy, it reports the findings of thirty-nine studies of school lunch management made from 1946 to 1948. The following are some of the areas investigated and reported: nutritive value of lunches, plate waste, foods used, training and experience of workers, equipment, and receipts and costs. Thirty questions by which a supervisor can evaluate local management are given. Copies may be obtained on request from the U.S.D.A. Office of Information, Washington 25.

A second new publication of the same Bureau is Home and Garden Bulletin No. 3, titled *Tools for Food Preparation and Diswashing*. Its author is Elizabeth Beveridge. Tools for food preparation are classified according to their uses as follows: cutlery; stirring, lifting, dipping, turning; beating and whipping; chopping and mashing; draining, straining, sifting; pastry tools; opening food containers, measuring; mixing bowls; and food storage containers. Lists are given to help the purchaser determine essential items. It may be purchased from the Superintendent of Documents for 10 cents.

"Sweetpotato Recipes" is the title of another new pamphlet released by the Bureau of Human Nutrition and Home Economics, as Leaflet No. 293 (formerly AIS-58). General information on sweet potatoes is provided, as well as recipes for their use as a vegetable, as leftovers, and as desserts.

*Nutrition Up-to-Date, Up to You* is also on the Bureau's list of new publications. It is reprinted from Home and Garden Bulletin No. 1 and now has been issued as Family Fare Separate 1. It is written to help homemakers (a) serve enjoyable meals, (b) keep their families well nourished, (c) practice thrift when need be, and (d) save time and energy where possible. It contains sections on nutrition, food planning, food buying, and storage. Included in the section on planning is a table showing servings per

**Special Note:** First published in 1947, this review of enrichment requirements in the U.S.A. is now brought up to date by the inclusion of milled white rice, the latest grain food to be fortified with vitamins and minerals. This year, the Tenth Anniversary of white bread and flour enrichment, is an appropriate time to publish a new edition of this popular, helpful resume. We shall be pleased to supply extra copies gratis. Just write our Vitamin Division.


# The ROCHE REVIEW of enrichment requirements

ALL FIGURES REPRESENT MILLIGRAMS PER POUND

| PRODUCT | Thiamine ($B_1$) | | Riboflavin ($B_2$) | | Niacin | | Iron | |
|---|---|---|---|---|---|---|---|---|
| | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
| Enriched BREAD, or other baked products | 1.1 | 1.8 | 0.7 | 1.6 | 10.0 | 15.0 | 8.0 | 12.5 |
| Enriched FLOUR[1] | 2.0 | 2.5 | 1.2 | 1.5 | 16.0 | 20.0 | 13.0 | 16.5 |
| Enriched FARINA[2] | 1.66 | – | 1.2 | – | 6.0 | – | 6.0 | – |
| Enriched MACARONI products[3] | 4.0 | 5.0 | 1.7 | 2.2 | 27.0 | 34.0 | 13.0 | 16.5 |
| Enriched NOODLE products[3] | 4.0 | 5.0 | 1.7 | 2.2 | 27.0 | 34.0 | 13.0 | 16.5 |
| Enriched CORN MEALS | 2.0 | 3.0 | 1.2 | 1.8 | 16.0 | 24.0 | 13.0 | 26.0 |
| Enriched CORN GRITS[4] | 2.0 | 3.0 | 1.2 | 1.8 | 16.0 | 24.0 | 13.0 | 26.0 |
| Enriched MILLED WHITE RICE[5] | 2.0 | – | * | | 16.0 | – | 13.0 | – |

1. *In enriched self-rising flour, calcium is also required between limits of 500-1500 mg. per pound.*
2. *No maximum levels have been enforced.*
3. *Levels allow for 30-50% losses in kitchen procedure.*
4. *Levels must not fall below 85% of minimum figures after a specific rinsing test described in the Federal Standards of Identity.*
5. *Levels must not fall below 85% of levels shown after washing and rinsing.*

**Omitted in the U.S.A. and Puerto Rico but used in certain Far Eastern countries to a minimum level of 1.2 mg. per pound.*

The maximum and minimum levels shown above for enriched bread, enriched flour, enriched farina, enriched macaroni, spaghetti and noodle products, enriched corn meal and corn grits are in accordance with Federal Standards of Identity or State laws. Act No. 183 of the Government of Puerto Rico requires the use of enriched flour for all products made wholly or in part of flour. This includes crackers, pretzels, etc.

The levels for milled white rice are officially those of the Government of Puerto Rico. These levels are commonly accepted in U. S. domestic and export marketing and are based on the recommendation of the Committee on Cereals, Food and Nutrition Board, National Research Council.

ROCHE **VITAMINS FOR ENRICHMENT**

VITAMIN DIVISION · HOFFMANN-LA ROCHE INC. · NUTLEY 10, N. J.

In Canada: Hoffmann-La Roche, Ltd., Montreal, Que.

pound for fresh vegetables and fruits and cereals and cereal products, as well as canned, dried, and frozen foods. The booklet is available from the Superintendent of Documents for 10 cents a copy.

**Catalog of Health Education Materials.** A new catalog, titled "Health Education Materials" has been received in the A.D.A. office from Health Publications Institute, Inc., 216 North Dawson Street, Raleigh, North Carolina. The materials are classified according to the following headings: mental health, family life education, maternal and child health, nutrition, heart, cancer, diabetes, communicable diseases, venereal disease, dental health, and sanitation.

**UNESCO-CARE Book Program.** Announcement has been made that the UNESCO-CARE book program has been extended for another year. Under this plan, contributions are welcomed for the purchase of new scientific and technical books for educational institutions in war-devastated and under-developed countries in Europe and Asia. CARE (20 Broad Street, New York 5) accepts contributions of any amount for this purpose. If the sum is $10 or more, the donor may designate the institution to which publications should be sent. If it is under $10, the money is pooled in a general fund. During the first year of operation of this plan, nearly $1 million were received, and text and reference works have been sent to 378 institutions in 24 countries, of which 20 per cent were in the medical field and 10 per cent pertained to health and welfare. Book purchases are based on extensive lists compiled by a committee of U.S. librarians and scientists.

**UNESCO Film Strips.** The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has prepared a series of six film strips to promote the principles of human rights as set out in the UN Universal Declaration of Human Rights. The titles of the six films are: "Milestones, "Abolition of Slavery," "Emancipation of Women," "Freedom of Thought," "The Right to Education," and "Arts and Life." Each deals with a single article of the Universal Declaration. These are available with explanatory notes in English, French, Spanish, Arabic, and German. The cost is $3 for the set of six, or 50 cents for the individual film strips. They are obtainable from the UNESCO National Commission in the U.S.

**State Department Needs Movies.** The Office of International Information of the Department of State needs good motion pictures for use in its overseas information and educational program. Pictures showing various phases of life in the U. S., as well as technical films, are desired. Most urgent needs are for industrial films of a factual, documentary type, which show clearly and honestly how Americans look, act, work, and live. The aim of the program is to quell the spread of communism and to retain good will for Americans, their ideals, their products, and exports. The program is similar to that of the "Voice of America," except that the vehicle of communication is visual rather than auditory. Those who wish to know more about the needs or have films to offer should get in touch with

Herbert Depew
Office of International Information
U.S. Department of State
165 West 46th Street
New York 19, New York

**Dried Honey**. Honey is not widely used in commercially made products because it is too sticky to mix easily with dried foods. Dried powdered honey would be convenient for such purposes, but honey is highly hygroscopic, absorbing moisture readily even from the air. Thus it is difficult to dry and almost impossible to keep dried.

Experiments conducted under the Research and Marketing Act by the Department of Agriculture have shown that this disadvantage can be overcome by combining honey with milk which dries readily. Also, skim milk is plentiful. The dried mixture is suitable for use in baby formulas, breads, cakes and other baked goods, prepared mixes and confections, such as nougats and fudges.

Honey can be dried with skim milk by two methods: (a) honey and liquid skim milk may be spray-dried together, or (b) honey can be mixed with dried skim milk and then tunnel-dried. Both dried products have kept well for a year. Tests showed that the dried mixture that makes up and keeps best contains 40

How to get more meat on your trays at less cost!
Dietitians find that with the high cost of meats, it is increasingly difficult to keep within their meat appropriations and still serve nourishing meat courses to their patients. Tests have shown that certain meats roasted at 300° shrink only 10% while similar cuts of meat, roasted at 450° will shrink as much as 30%. Meat roasted at accurately controlled LOW TEMPERATURE in a large capacity, heavily insulated BLODGETT Oven retains all its flavor and juices, and gives more servings to the pound. BLODGETT'S a natural for casseroles, too. One large single deck offers space for as many as 116 low-cost individual casserole dishes.
Blodgett makes ovens from its "Basic Three" design which provides the units to make 24 models.
THE G. S. BLODGETT CO. INC.
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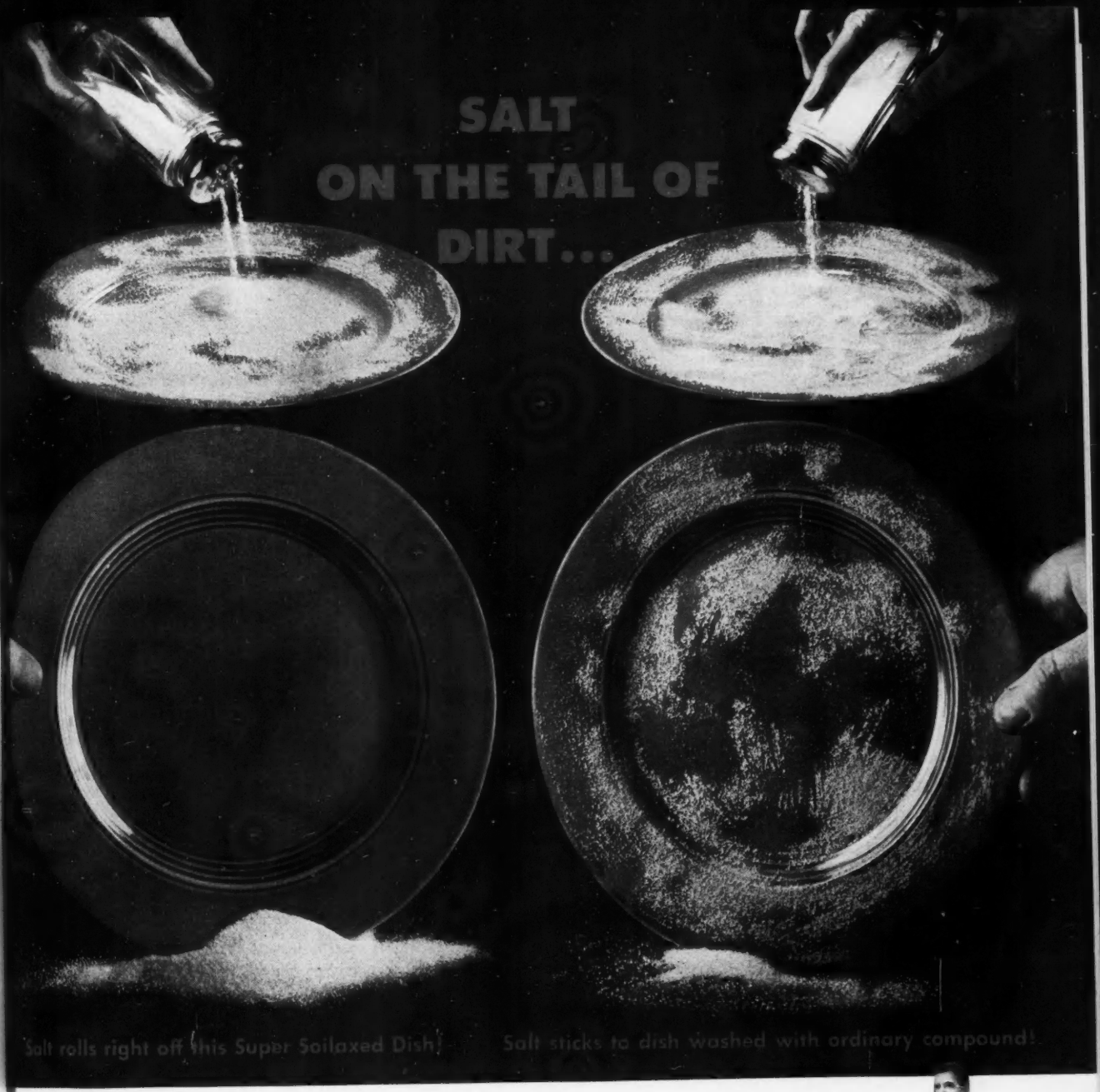


## Proof that the SUPER SOILAXED DISH is the SANITARY DISH!

THE two dishes above were washed in the same machine. They were dried for equal periods. No difference, *except*—one was washed in ordinary washing compound, the other in Super Soilax. Both were then sprinkled with table salt. See what's happened. There's *proof* that Super Soilax removes *all* traces of sticky food film!

When you use Super Soilax in dishwashing machines, you can be sure tableware is really clean! Super Soilax removes all grease—prevents precipitation of film-forming elements—floats them all down the drain! Get *facts* about the super-cleansing properties of Super Soilax! Call your Soilax Serviceman today—or write for your free copy of "Dishwashing Dividends!"

**ECONOMICS LABORATORY, INC., EL**
**GUARDIAN BUILDING, ST. PAUL 1, MINN.**

***Also manufacturers of* TETROX *for manual dishwashing, and* PAN DANDY*—new, activated pot and pan washing compound.***

**Remember the Service behind the Product!**

## BY EVERY TEST—IT'S SUPER SOILAX FOR SUPER SANITATION!

parts honey to 60 parts skim milk. Half honey and half milk is sticky, difficult to handle, and absorbs moisture too readily for stable storage.

**Use of Commercially Prepared Apple Products.** To learn how the homemaker uses prepared apple products, the Bureau of Agricultural Economics, U.S.D.A., has conducted a survey on preferences and uses of canned and frozen applesauce, apple butter, canned apples for pies, readymade pies, dried apples and apple mix, and apple juice. As expected, urban homemakers bought more of these prepared items than rural women, many of whom grow their own apples. The young homemakers and those with higher incomes reported using more than older women or those with lower incomes.

Rural women used more apple butter and dried apples, while city women used more of all other commercially prepared apple products. A little less than half the women reported buying apple butter, rural women using it more than city women.

Applesauce is bought in the store by almost 60 per cent of those interviewed, although more than half the women also make it and use more that is homemade than commercially packed. The chief reasons given for buying applesauce were convenience and availability. Criticisms included "too sweet," "flat," and "tinny-flavored."

Almost 40 per cent reported having bought apple pie, the heavier buyers being urban homemakers. They also buy more canned applies for pie and more apple juice.


# Reprints from the Journal

Old reprints from this Journal remain popular and in demand, although they no longer appear on the regular List of Publications and Reprints of the American Dietetic Association. Listed below are some of the most popular, which may be ordered by checking the boxes and sending remittance to the Association Office.

- ☐ Can Training Pay Dividends?—*A. H. Clawson* (May) 1947 ..... $.10
- ☐ Evaluation of a Training Program for Hospital Dietary Employees—*M. K. Espy* (March) 1948 ..... .10
- ☐ Points to Remember in Kitchen Planning—*O. Webber* (Dec.) 1946 ..... .10
- ☐ A Century of Progress in Nutrition—*C. M. McCay and E. N. Todhunter* (Sept.) 1948 ..... .10

Comparison of Meat and Legumes in a Controlled Feeding Program—*P. B. Mack et al.*

- ☐ I. Dietary Plan (June) 1947 ..... .10
- ☐ II. Medical, Dental, and Laboratory Observations (July) 1947 ..... .10
- ☐ III. Discussion of Findings (Aug.) 1947 ..... .10

Terminal Heating of Infant Formula—*F. R. Smith et al.*

- ☐ I. Bacteriological Investigation of Low-Pressure Technique (Sept.) 1948 ..... .10
- ☐ II. Bacteriological Investigation of High-Pressure Technique (Sept.) 1948 ..... .10
- ☐ Corn Starch as an Allergen—*T. G. Randolph* (April) 1948 ..... .10
- ☐ Trends in Family Food Consumption—Implications for Child Feeding—*H. K. Stiebeling* (April) 1950 ..... .10
- ☐ Bland Diet in Ulcer Therapy—*D. Johnson* (Aug.) 1947 ..... .10
- ☐ The Child and His Food. Group Feeding for Hospitalized Children. The Nurses Approach to the Feeding of Children—(July) 1949 ..... .15
- ☐ Free vs. Controlled Regime in Juvenile Diabetes—*P. White* (Sept.) 1949 .10
- ☐ Motivation in Health Education—*I. Galdston* (Sept.) 1949 ..... .10
- ☐ Nutritionists and Social Workers Cooperate on Mutual Problems—*E. Walsh* (Aug.) 1949 ..... .10

New reprints become available each month, as papers appear in the Journal. Some of the more recent reprints are listed below:

Dietary Consultation—A Service for Small Institutions

- ☐ I. Scope of Work—*Marian C. Jones* (Sept.) 1950 ..... $.15
- ☐ II. Menu Planning (Oct.) 1950 ..... .15
- ☐ III. Food Preparation, Storage, and Waste (Nov.) 1950 ..... .15
- ☐ IV. Problems of Sanitation (Dec.) 1950 ..... .15
- ☐ V. Rules of Sanitation—*E. B. Buchanan* (Dec.) 1950 ..... .15
- ☐ VI. Planning Layout and Equipment—*W. D. Robinson* (Jan.) 1951 .15
- ☐ VII. Employee Training—A Part of Personnel Management (Feb.) 1951 ..... .15
- ☐ VIII. Food Cost Accounting (April) 1951 ..... .15
- ☐ What Are Cleaning Materials? How Do They Work?—*S. J. Miller* (Jan.) 1951 ..... .15
- ☐ Limitations on the Use of Dietary Standards—*L. B. Pett* (Jan.) 1951 .15
- ☐ Our Professional Mirrors—*L. S. Coover* (Jan.) 1951 ..... .05
- ☐ The Professional Growth of the Intern—*L. S. Coover* (Feb.) 1951 ..... .05
- ☐ Workshop Techniques in Action—*I. J. Gordon* (Feb.) 1951 ..... .20
- ☐ Sodium Values of a Selected Group of Foods—*B. L. Irwin* and *C. Schuch* (Feb.) 1951 ..... .15
- ☐ Progress in Cereal Enrichment—*R. R. Williams* (April) 1951 ..... .15

Order any of the above reprints by checking the boxes to the left and sending remittance. A more complete *List of Publications and Reprints of The American Dietetic Association* is also available on request.

**AMERICAN DIETETIC ASSOCIATION**

**620 North Michigan Avenue Chicago 11, Illinois**


**Shifts in Southern Food Habits.** A general survey of Mississippi farm people during the period 1936–'48, according to Dorothy Dickins of the Mississippi Experiment Station, discloses the increasing urbanity of the people. In addition to the commercialization of clothing, entertainment, jobs, and general standards of living, Dr. Dickins brings out some interesting dietetic changes in the dozen years covered. Commercially prepared foods have taken the place of "home grown," particularly where breads, cereals, and pastries are concerned. Soft drinks, frozen foods, and dessert mixes, unknown in prewar days, were common in the 1948 survey. Commercial sirup—usually a mixture of corn and cane—instead of sorghum sirup is being used more and more. However, Dr. Dickins also states that consumer education is still lacking, and that the need for nutrition work in this area is vital—before the homemaker completely leaves garden and plough for the supermarket, with all its pitfalls for the illiterate palate and purse.

## *News of State Associations*

**Arkansas Dietetic Association.** At the January meeting of the Arkansas Dietetic Association, Thelma Meharg, School Lunch Supervisor, Arkansas Department of Education, Little Rock, spoke on "The School Lunch Program in Arkansas." This year, those who travel in the state are making a special effort to contact members of the Association in isolated areas to stimulate their interest in the state association activities and to make them more aware of "The Dietitian in the Community."

"Improving the Nutrition Education of Student Nurses" was selected as the main project of the Arkansas Association for this year. A workshop is being planned for April 6 and 7, with attendance limited to the teaching dietitian, educational director, and clinical nurse from each of eight hospital training courses for nurses in the state. Henderika J. Rynbergen, Cornell University-New York Hospital School of Nursing, New York City, will be the leader of the workshop. Other resource people from within the state are also being invited. Allied organizations which will co-sponsor the workshop are the Arkansas League of Nursing Education, the Arkansas Hospital Association, and the Arkansas State Board of Health.

**California Dietetic Association.** The Treasurer of the *Bay Section* has reported that, at the Harvest Festival jointly sponsored in the fall by the Bay Regional Association and the Home Economists in Business, $247.16 were raised for the summer camp for diabetic children. Speaker of the January meeting of the Bay Section was a representative of S & W Fine Foods who discussed grades of canned goods and explained what the dietitian may expect from each grade in taste, texture number of servings, econ-

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**U. S. ARMY MEDICAL SERVICE**

omy, and appearance. Samples were available for inspection and tasting. In February the group—heard a panel discussion on "Kitchen Planning" by Dolores L. Myhus, U.S. Public Health Service; Alvina Huesman Zeibak, Chief Dietitian, University of California Hospitals; and Margaret Davis, Chief Dietitian, Mt. Zion Hospital, San Francisco. At the March meeting, Dr. Agnes Fay Morgan, University of California, repeated a lecture she had presented earlier at the 28th Annual Faculty Research Lecture during the Charter Week exercises of the University. She was the first woman so honored. Dietitians brought their superiors as guests to this meeting. In April, Dr. John Gofman is to speak on the research done by his group at the Donner Research Laboratory with low-fat, low-cholesterol diets. The authors of *The Low Fat, Low Cholesterol Diet* will also be present to discuss their new book.

The *Los Angeles Section* in January heard John M. Pfiffner, Professor of Public Administration, University of Southern California, speak on "Supervision of Personnel," which is the title of his recent book. Dr. Pfiffner outlined the important points of his book, correlating them with the work of the dietitian. He emphasized the need for management to be democratic. It can be a healthy situation if the supervisor is willing to listen to his subordinates when they have ideas. In conclusion, Dr. Pfiffner said that there is a tendency for supervisors to "run away" from problems, but a good administrator should realize that it is necessary to "talk turkey" to individuals at times.

In January, Bernice Copeland of the Los Angeles office of the State Social Welfare Department, was the guest speaker of the *Santa Barbara Section*. She discussed problems related to her work in the Santa Barbara County area. The Santa Barbara Section has been working on several projects. The first was concerned with the new method of figuring diabetic diets; the second with public relations. The section has 100 copies each of "Dietitians Today" and "Double Feature" for distribution to the high schools of Santa Barbara and Ventura counties, as well as the University of California at Santa Barbara.

The *San Diego Section* recently heard Fred Schute, Business Manager, La Jolla Town Council, lecture on civilian defense. For the March meeting, a talk on sanitation by a representative of the Public Health Department was scheduled.

Meetings of the *Central Valley Dietetic Association* for March included a program on "Food Cost Control" and "Food Cost Accounting," topics discussed respectively by Nelma Saylor and Maxine Merrick, and a panel discussion on the "Dietary Problems Connected with Low Sodium," in which Nell M. Hathaway, Elizabeth Claghorn, and Sister Justina participated.

**Colorado Dietetic Association.** Dr. C. A. Cajori of the University of Colorado discussed advances in the control of dental caries at the Colorado Dietetic Association's annual fall meeting in Denver on November 4. The group later met for dinner at Tiffin's, where Paul Shank, owner and manager of the restaurant, spoke on opportunities for dietitians in commercial food service.

Officers of the Colorado Association for 1950–1951 are: President, Virginia Beal, Child Research Council, Denver; President-Elect, Inez Stocking, V.A. Hospital, Fort Logan; Secretary Johanna Gates, Colorado General Hospital, Denver; Treasurer, Josephine Faunec, St. Luke's Hospital, Denver. Section chairmen are: Community Nutrition, Jane Pace; Diet Therapy, Margaret Elliott; Food Administration, Berenice Sexauer; Professional Education, Elsie Hooker.

**Louisiana Dietetic Association.** The fall meeting of the Louisiana Dietetic Association in November was held at Southwestern Louisiana Institute Lafayette. Reports of the A.D.A. meeting in Washington and the work of the state section projects were heard, in addition to the regular business. Other features of the program were a talk by Lillian Nelson, Hotel Dieu, New Orleans, who spoke on "New Methods of Calculating Diabetic Diets and New Trends in Pediatric Feeding," and two talks by Vera W. Walker, Consultant, Florida State Welfare Board, Jacksonville.

**Maryland Dietetic Association.** Civil defense was the keynote of the February meeting of the Maryland Dietetic Association, held at University Hospital, Baltimore. Speakers included Dr. Wil


A SUPERINTENDENT OF SCHOOLS COMMENTS ON

Prolon Ware

The beautifully equipped new Stone School recently completed in Walpole, Massachusetts, at a cost of over $500,000. Perry, Shaw and Hepburn, Kehoe & Dean, Architects, Boston, Massachusetts.

WE ORIGINALLY EQUIPPED the Stone School cafeteria with Prolon Ware because we felt that it would greatly reduce the customary expense of replacement. We were also impressed with Prolon Ware's attractive design and colors.

While this installation has been in service only since the beginning of the fall term last year, we are already delighted with its sturdiness, the quietness of service and particularly with the way it goes through the washing machines and comes out sparkling and clean. We consider Prolon Ware a notable step forward in the improvement of luncheon ware for school use.

Sincerely,

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Superintendent of Schools,
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Prolon Ware... The new Melmac* Tableware with the "PROLON GLAZE"

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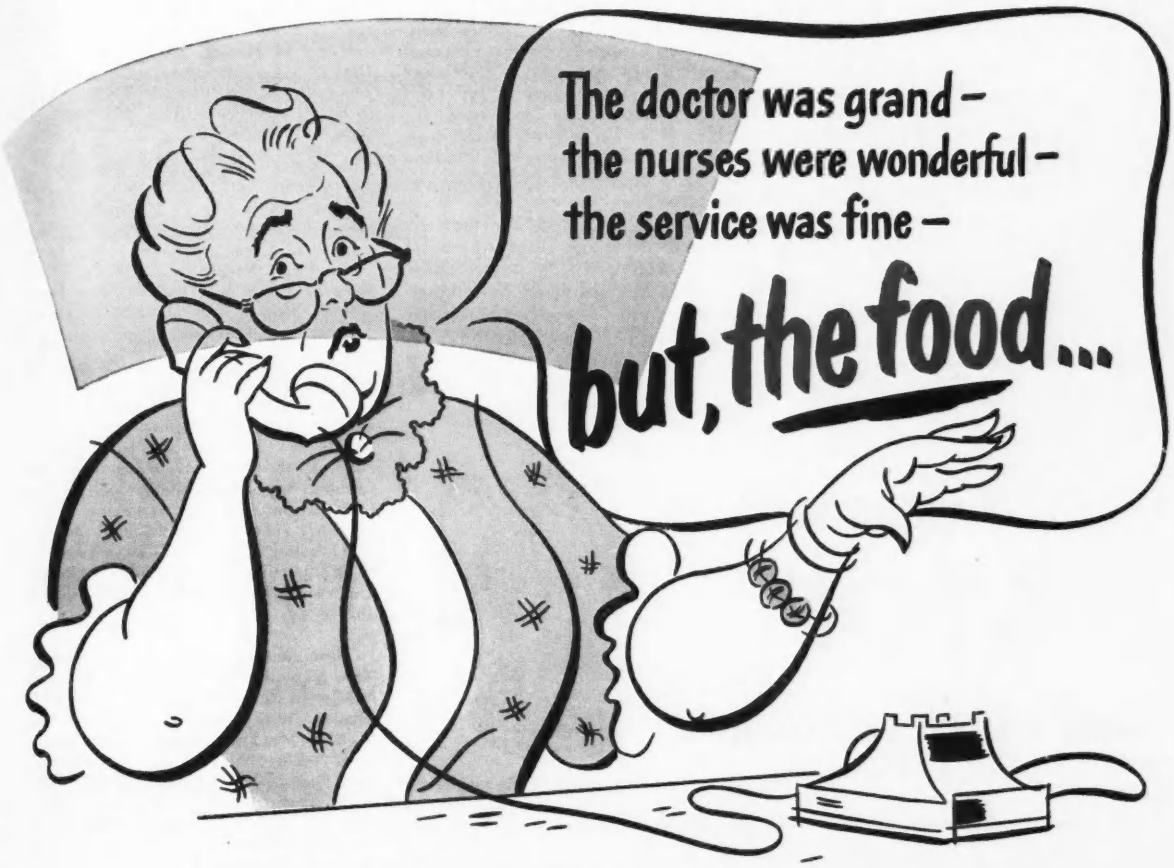


• A lot of the hospital's time and money (20% to 30% of every operating dollar) is spent on food service. Yet the fact remains—the number one patient complaint in hundreds of hospitals concerns the food they are served.

***Don't blame your dietitians.*** They're seeing that good, nourishing, palatable food is prepared. What they can't control is how it looks and tastes by the time each patient is ready to eat it. And will the food stay deliciously savory throughout the eating period—regardless of interruptions?

**The Mealpack System** guarantees that hot or cold foods will still be that way when they're served . . . and *stay* that way throughout the meal. It saves floor space and eliminates floor pantries. It will more than pay its own way in virtually any hospital, large or small, old or new!

The Mealpack System *has been given the acid test of comparative surveys in hospitals of every type and size. It has proved itself, without exception. On that basis, we invite you to investigate its many vital advantages.*

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mer Schulze of the Baltimore City Health Department, who talked on "Civil Defense in Maryland," and Eleanor L. McKnight, whose subject was "The Role of Dietitians in Civil Defense." Seven dietitians have been appointed to the Committee on Civil Defense of the Maryland Dietetic Association. In March Dr. Benjamin Posamanick, School of Hygiene and Public Health, Johns Hopkins University, spoke to the group on "The Relation of Prenatal and Postnatal Diet to Behavioral Development."

Section activities for this year have been well supported by members of the Maryland Dietetic Association. The Community Nutrition Section is revising its course for food handlers, first given in 1949. The Diet Therapy Section is compiling a pamphlet which will list trademarked "dietetic" foods, together with the composition of various nutrients, relative range of price, and names of places where they may be purchased in the state. The project of the Food Administration Section has been the planning of a four-session workshop to be held this month. Members of the Professional Education section have reviewed two books for each issue of the state bulletin, and have also been responsible for a bulletin board and exhibit at the Central Y.W.C.A. in Baltimore. Members of the Maryland Association, as personal public relations activities, are appearing before a number of audiences, such as the Maryland Home Economics Association, college home economics classes, and the radio.


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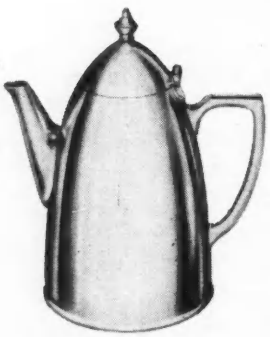

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10-oz. and 20-oz. capacity
All models etched with crest or name at slight additional cost.


**Missouri Dietetic Association.** Some three hundred people attended the joint meeting of the *St. Louis Dietetic* and Diabetic Associations on January 25. The program was divided into two parts, the first half devoted to the following talks:

"The Normal Diabetic Diet" by Dorothy Robinson, Chief Dietitian, Lutheran Hospital

"Diabetic Diets for Children" by Kay Bitters, Chief Dietitian, St. Louis Children's Hospital

"Special Foods for Diabetics" by Rosemary Burns, Therapeutic Dietitian, Deaconess Hospital

Following these speeches, the audience saw displays dealing with various phases of the diet of a diabetic patient. These displays, which had been prepared by the dietary staffs of eleven hospitals, covered the following aspects of the problem: special diabetic foods, meat preparation, desserts, working man's lunches, school lunches, food equivalents, salads, normal diets compared to the diabetic diet party food for children, and a comparison of meals before insulin and today.

**New Jersey Dietetic Association.** The New Jersey Dietetic Association met with the New Jersey Home Economics Association in February. Dr. Walter Maclinn, Food Technologist, New Jersey Experimental Station, Rutgers University, New Brunswick, spoke on approved techniques in the canning industry. He described the methods of canning foods under 20 lb. pressure which results in tremendous reduction of processing time and greater retention of vitamins.

Factors affecting nutrition in older people were discussed by Kathleen Newton, who is in charge of nurses and instruction in the Out Patient Department, New York Hospital, New York City. She emphasized the fact that many of our aged suffer from malnutrition. The protein, vitamin, and mineral demands of the aged are approximately the same as those of the younger adult. The older person does require more calcium and fewer calories. The greatest need is that such a person remain a part of the family and community, so that feelings of loneliness and uselessness, which result in poor eating habits and impaired digestion, can be prevented.

**New York State Dietetic Association.** The Greater New York Dietetic Association presented the annual Mary Swartz Rose Memorial Lecture at the New York Academy of Medicine on February 20. Dr. Aaron Kellner, Director of Central Laboratories, New York Hospital, Cornell Medical Center, was the speaker, his topic being "The Relation of Cholesterol Metabolism to the Pathogenesis of Atherosclerosis."

**North Carolina Dietetic Association.** The February program of the *Charlotte Dietetic Association* included talks by Dr. J. Kingsley MacDonald of the city's civil defense organization and Dr. Bertlyn Bosley of the North Carolina Board of Health.

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*Now in individual cellophane moistureproof packages . . .*

## DANDY OYSTER CRACKERS

**. . . ideal for soup . . . chowder . . . chili**

### Taste better...

All the good, tasty flavor of these salt-sprinkled soup and oyster crackers is sealed right in the new moistureproof envelope.

### Reduce waste...

No danger of the crackers becoming limp and soggy—less chance for breakage, too. The right-sized portion for average soup servings.

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The new cellophane package retains the oven-baked crispness which makes Dandy Oyster Crackers so tempting and delicious.

### Save time...

No special handling of unused crackers necessary. Always ready and appetizing in the neat, clean cellophane packet!

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Dr. MacDonald urged dietitians to plan the types of food which could be served in an emergency. He explained that plans must be made to take care of refugees in time of disaster, and that plans for a four-day period are necessary. All members of the group volunteered their services to the civil defense organization, as well as to the Red Cross canteen services.

Dr. Bosley described the nutrition program of the State Board of Health, which is carried out by nine nutritionists and two consulting dietitians. Six of the nutritionists aid local health departments in establishing and carrying out nutrition programs. One nutritionist is assigned to a local health center which is developing a training center cooperatively with the School of Public Health, University of North Carolina. The other two nutritionists serve in an administrative capacity. The consulting dietitians provide serve to state and county hospitals and institutions, as well as advisory serve to hospitals built under the Medical Care Commission.

The Charlotte *Observer* recently carried a comprehensive feature story on dietetics, describing the work, the internship at Charlotte Memorial Hospital, and opportunities within the field.

**Ohio Dietetic Association.** The spring meeting of the Ohio Dietetic Association will be held in Dayton, April 13 to 14. Features of the program will be a discussion of "Isotopes in Medicine" by Dr. Claude Starr-Wright, Assistant Professor, Ohio State University Medical School; and a panel discussion on "The Law and the Food Service Worker." Participants in the panel will include representatives from the State Department of Industrial Relations and the Industrial Commission, hospital dietitians, and commercial restaurant managers. Lillian Storms Coover, A.D.A. President, will represent the Association and report on "National Affairs."

**West Virginia Dietetic Association.** Officers for 1950–1951 for the *Charleston Dietetic Association* are: President, Mary Frances Wootton, Charleston General Hospital; President-Elect, Ona Frances Gadd, McMillan Hospital; and Secretary, Mary Jane Couture, Marmet Children's Hospital.


# *canned foods for emergency feeding*

CIVIL DEFENSE PLANS call for the use of protectively packaged foods in certain types of emergency feeding. Hermetically sealed tin and glass containers provide the most complete protection against a serious food contamination problem.

Canned food would not only supply the necessary nutrition, but might also be the only source of uncontaminated drink.

Should facilities for home preparation of food be disrupted, ready-cooked foods in cans and jars would be of vital importance. Time saved in the preparation of meals would be much needed elsewhere.

A guide outlining the use of canned foods for emergency feeding has been prepared. Copies of "*Canned Foods for Emergency Feeding*" will be supplied upon request.

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Please send me ..... copies of "Canned Foods For Emergency Feeding."

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## *Association Activities*

**Representatives to State Meetings.** Representatives to spring state dietetic association meetings are as follows:

April 10—Helen S. Mitchell, Massachusetts Dietetic Association, Worcester

April 13–14—Lillian S. Coover, Ohio Dietetic Association, Dayton

April 13–14—Marguerite L. Pettee, Texas Dietetic Association, San Antonio

April 25–27—Ruth M. Yakel, Pennsylvania Dietetic Association, State College

April 26–27—Lillian S. Coover, joint meeting of the Virginia-Carolina Associations, Roanoke. This meeting is the result of an invitation from the Virginia-Carolina Hospital Conference, which is meeting at this time.

April 27–28—Margaret A. Ohlson, Kentucky Dietetic Association, Louisville

May 10–11—Lillian S. Coover, New York State Dietetic Association, Utica. Dr. Ohlson will also attend this meeting in the capacity of speaker on the program.

May 10–11—
Louisiana Dietetic Association, Baton Rouge

May 11—Alice Biester, North Dakota Dietetic Association, Jamestown. Winifred Howard Erickson is attending also, as a speaker.

May 15—Frances Welch, Arkansas Dietetic Association, Hot Springs

May 16–17—Lillian S. Coover, Minnesota Dietetic Association, Minneapolis Marion D. Floyd is also on the program.

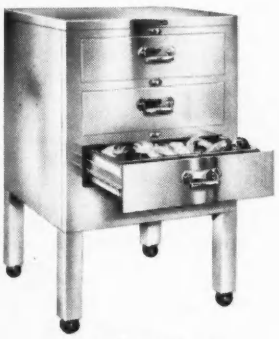
May 19—Helen S. Mitchell, Vermont Dietetic Association, Burlington

**Convention Planning.** The Program Advisory Planning Committee met in Chicago, February 10, to formulate the tentative program for our 1951 convention. Members of the Committee who attended were Mildred Baker, LeVelle Wood, and Grace Bulman, Chairman. Also present were Dr. Coover, Miss Yakel, Dorothea F. Turner, and Margaret L. Ross. Invitations have been issued to over sixty speakers, and a high percentage of acceptances has been received.

**American Academy of Pediatrics.** The Committee on Hospitals and Dispensaries of the American Academy of

*Specially cooked foods are kept constant in weight, color, and flavor...*

**HERE'S HOW PRESBYTERIAN HOSPITAL DOES IT!**



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**FOODS EXPOSED TO THE AIR** dry out, lose color. Those stored in uncontrolled moisture become soggy, lack appetite appeal. To solve this problem in its Quantitative Kitchen, the Presbyterian Hospital of Chicago installed the "Toastmaster" Roll and Food Warmer.

**CONSTANT TEMPERATURE AND HUMIDITY** are now maintained. Cooked vegetables that have been previously weighed retain their fresh flavor, color, and texture. Roasted meats are also kept more appetizing and palatable.

**THERE'S AN INCREASE** in serving speed and a saving in steps as well. The quantitative trays are made up and served from one central location. In their preparation, the trays are wheeled up to the "Toastmaster" Roll and Food Warmer where the weighed foods are added. Then, they are sent to the floors for serving.

**CLEANLINESS AND SANITATION ARE MADE EASY** with the stainless steel drawers and exterior finish. A plug-in-appliance, it can be put to use immediately wherever needed. In service at the Presbyterian Hospital about two years, this "Toastmaster" Roll and Food Warmer has never required any maintenance of any kind.

**YOUR FOOD SERVICE EQUIPMENT DEALER** will be glad to show you all the advantages of the "Toastmaster"* Roll and Food Warmer. Call him about it, now.

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Pediatrics has been given the assignment of formulating and publishing a booklet on minimal hospital standards for the care of sick children. A.D.A. was invited to appoint a representative to act as consultant to this committee. Lorraine G. Weng is serving in this capacity and attended the meetings of the group in Chicago on March 15 and 16. Other groups represented are the U.S. Public Health Service, the American Hospital Association, the League for Nursing Education, and the American association of Medical Social Workers.

**Meetings with Allied Groups.** The *Southern Conference on Gerontology* was held at the University of Florida, Gainesville, March 19 and 20. The Association was invited to send a representative.

The *National Conference for Mobilization of Health Education, Physical Education and Recreation* took place March 19 and 21, in Washington, D.C., and a representative from A.D.A. was requested.

Frances Crain represented A.D.A. as a consultant for the Career Conference sponsored by the *National Urban League* and the *Tennessee Agricultural and Industrial State College*, Nashville, on March 21 and 22. The conference was held at the college.

**Exhibits at Allied Meetings.** Members of the Association participated in two national conventions during the month of March. When the *American Academy of General Practice* met in San Francisco, March 19 to 22, members of the Bay Section of the California Dietetic Association assisted with an exhibit, was titled "The Clinical Management of Diabetes Mellitus," was a cooperative activity, sponsored by the Diabetes Section of the U.S. Public Health Service, with the assistance of A.D.A. and the American Diabetes Association.

The annual meeting of the *National Vocational Guidance Association* was held in Chicago, March 26 to 29. Our exhibit, "Dietitians, Nutritionists Serve the Community," was shown. The booth was manned by members of the Chicago Dietetic Association.

**New Local Associations.** The records of the national office indicate that the following new local associations have been organized:

Alexandria and Shreveport, Louisiana
Birmingham, Alabama
Charleston, West Virginia
Charlotte, North Carolina
Nittany Valley, Pennsylvania
Northern Connecticut
Sioux Falls, South Dakota (a home economics group including dietitians)
Yakima, Pullman, and Spokane, Washington.

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PRESIDENT
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"We made a complete installation of Boontonware three years ago.
Since then, it has been used to serve about 1000 meals per day.
90% of the original Boontonware is still in use. The over-all installation has saved us about $5000 per year. We have never made a better investment in our 27 years of restaurant business.
We consider Boontonware the best and most efficient Melmac dinnerware in the field and are glad to give it our unqualified endorsement."
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Fine Dinnerware Fashioned of MELMAC®
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## *News of Advertisers and Exhibitors*

**A.D.A. Photographic Contest.** Early this year, when Lillian Fried, A.D.A. Vocational Guidance Chairman, visited the Association office, the possibility of developing a photographic contest was discussed. By this means it was hoped that the Association's supply of artistic, interesting photographs of dietitians and nutritionists could be started. The contest is now a reality. For further details, refer to page 330.

Recent publications issued by the *Poultry and Egg National Board* include: "Poultry Products Add New Punch to the Lunch," which features nine recipes; "Cooking the Broiler-Fryer Turkey," which includes directions on broiling, roasting, oven-frying, and pan-frying small turkey; "Turkey," which gives basic information on buying, preparation, cooking, and serving of turkey; and "How to Carve Chicken and Turkey."

*Gerber Products Company* has introduced a new, pre-cooked Rice Cereal, developed to provide variety with valuable nutrients for infants and toddlers with allergy problems. The New Gerber Rice Cereal is hypo-allergenic and can thus be used for infants with wheat or oat allergies. It is supplemented with the essential B vitamins from rice bran extract plus crystalline thiamine, riboflavin, and niacinamide.

The *Applied Plastics Div., Keystone* Brass Works has added two new bowls to its Restraware line, which is made of heavy duty Melmac. The additions bring to fifteen the number of pieces available. A choice of eight colors aids in designating floors or wards in hospitals and in controlling inventories. The Restraware line has been designed especially for standard tray service and standard food portions.